

# QUARTERLY REPORT ON INFLATION

## June 2013



MAGYAR NEMZETI BANK



**QUARTERLY REPORT ON INFLATION**  
**June 2013**

Published by the Magyar Nemzeti Bank

Publisher in charge: Eszter Hergár

8–9 Szabadság tér, H-1850 Budapest

[www.mnb.hu](http://www.mnb.hu)

ISSN 1418-8716 (online)

*Act CCVIII of 2011 on the Magyar Nemzeti Bank, defines the primary objective of Hungary's central bank as the achievement and maintenance of price stability. Low inflation allows the economy to function more effectively, contributes to better economic growth over time and helps to moderate cyclical fluctuations in output and employment.*

*In the inflation targeting system, since August 2005 the Bank has sought to attain price stability by ensuring an inflation rate near the 3 per cent medium-term objective. The Monetary Council, the supreme decision-making body of the Magyar Nemzeti Bank, performs a comprehensive review of the expected development of inflation every three months, in order to establish the monetary conditions consistent with achieving the inflation target. The Council's decision is the result of careful consideration of a wide range of factors, including an assessment of prospective economic developments, the inflation outlook, money and capital market trends and risks to stability.*

*In order to provide the public with clear insight into the operation of monetary policy and to enhance transparency, the Bank publishes the information available at the time of making its monetary policy decisions. The Report presents the inflation forecasts prepared by the Directorate Monetary Policy and Financial Market Analysis, Directorate Fiscal Analysis, Directorate Financial System Analysis, as well as the macroeconomic developments underlying these forecasts. The Report is published quarterly. The forecasts are based on the assumption of endogenous monetary policy. In respect of economic variables exogenous to monetary policy, the forecasting rules used in previous issues of the Report are applied.*

The analyses in this *Report* were prepared by staff in the MNB's Directorate Economic Forecast and Analysis, Directorate Monetary Policy and Financial Market Analysis, Directorate Fiscal Analysis, Directorate Financial System Analysis, under the Executive Director Dániel Palotai. The Report was approved for publication by Dr. Ádám Balog, Deputy Governor.

The *Report* incorporates valuable input from the Monetary Council's comments. The projections and policy considerations, however, reflect the views of staff in the Directorate Economic Forecast and Analysis, Directorate Monetary Policy and Financial Market Analysis, Directorate Fiscal Analysis, Directorate Financial System Analysis and do not necessarily reflect those of the Monetary Council or the MNB.

*The projections are based on information available in the period to 19 June 2013.*



# Contents

<b>The monetary council's statement in the June 2013 issue of the Quarterly Report on Inflation</b>	<b>7</b>
<b>1 Inflation and real economy outlook</b>	<b>11</b>
1.1 Inflation forecast	13
1.2 Real economy forecast	16
1.3 Labour market forecast	21
<b>2 Effects of alternative scenarios on our forecast</b>	<b>24</b>
<b>3 Macroeconomic overview</b>	<b>26</b>
3.1 International environment	26
3.2 Aggregate demand	31
3.3 Production and potential output	35
3.4 Employment and labour market	41
3.5 Cyclical position of the economy	43
3.6 Costs and inflation	44
<b>4 Financial markets and lending</b>	<b>48</b>
4.1 Domestic financial market developments	48
4.2 Interest rate conditions in the financial intermediary system	52
<b>5 External position of the economy</b>	<b>55</b>
5.1 External balance and financing	55
5.2 Forecast for Hungary's external balance position	57
5.3 Fiscal developments	59
<b>6 Special topics</b>	<b>63</b>
6.1 Real economy effects of the Funding for Growth Scheme in our forecast	63
6.2 Cyclical and structural effects underlying the developments in unemployment	68
<b>7 Technical annex: decomposition of 2013 average inflation</b>	<b>73</b>

## List of boxes

Box 1-1: Anticipated inflationary consequences of the measures affecting the retail margin on cigarettes	15
Box 1-2: Relationship between household income and consumption demand	19
Box 3-1: Global automobile market trends and their domestic consequences	38
Box 6-1: Labour market mismatches and their measurement	70



# The monetary council's statement in the June 2013 issue of the Quarterly Report on Inflation

**The Monetary Council has reduced the level of the central bank base rate in a series of small steps, but significantly overall, since August 2012.**

The condition of the real economy, and particularly weak domestic demand, warranted a significant reduction in the base rate over the entire period, while the outlook for inflation shifted in the same direction and changes in perceptions of the risks associated with the economy were supportive. Consequently, incoming data and information have confirmed that the Monetary Council had appropriate room to continue the current monetary policy easing cycle. The recent policy actions have been consistent with the medium-term achievement of the inflation target.

The Council will maintain a consistent and conservative approach to monetary policy. In addition to the priority of meeting the inflation target in the medium term, the Council will also take into account the condition of the real economy and financial stability considerations. Marked and lasting shifts in perceptions of the risks associated with the country's economy may influence the room for manoeuvre in monetary policy.

**In the Council's judgement, the medium-term outlook for inflation remains consistent with the medium-term achievement of the inflation target.**

In the short term, inflation is likely to ease further, mainly driven by falls in administered prices and commodity prices, while developments in underlying inflation will continue to reflect the disinflationary impact of weak domestic demand. The inflation rate adjusted for the direct price level increasing effects of indirect taxes is expected remain below 3 per cent over the medium term. In the longer term, the effects of government measures increasing production costs in some sectors are likely to feed through to the corporate sector. With capacity utilisation remaining low, however, the pass-through to consumer prices is likely to be gradual and partial. Looking forward, companies' efforts to rebuild profitability, loose labour market conditions and the adjustment of inflation expectations are likely to lead to historically low earnings growth, which, in turn, may contribute to the maintenance of the low inflation environment. Overall, inflationary pressures are likely to remain moderate over the medium term.

**Global economic activity picked up in the first quarter of 2013. But the risk of a multispeed growth environment amidst the global recovery increased.**

Following the improvement in the previous period, sentiment in international financial markets weakened, while indicators of real economic activity remained subdued. The major central banks maintained or eased further monetary conditions in the past quarter, in line with the fragile economic situation and the low inflation environment. In terms of perceptions of the risks associated with the Hungarian economy, sentiment in global financial markets was supportive over the past quarter, but investor uncertainty has increased recently.

**Hungarian economic growth resumed in the first quarter of 2013.**

The rate of domestic growth, which was favourable in an international comparison, was also supported by the adjustment affecting output in some sectors of the economy at the beginning of the year. However, the slow improvement in

underlying growth suggests that the expansion of domestic GDP may continue in the next quarters. Growth is likely to be driven by exports, and new capacity created in the automobile industry may contribute to an increase in Hungary's export market share even as external demand remains subdued. Domestic demand is expected to stabilise this year following the decline in previous years. Household real income is expected to grow markedly this year, but the reduction in debts accumulated in previous years, tight lending conditions and precautionary motives may impede a faster recovery in consumption. The Council expects corporate investment to fall this year as the investment projects in the automobile industry are completed. With the outlook for demand improving, a tangible improvement in investment is likely to occur, which may be supported by favourable lending conditions for small and medium-sized enterprises resulting from the Funding for Growth Scheme. A material recovery in domestic demand is expected 2014.

**Hungary's current account adjustment has been one of the most significant across European Union countries since the onset of the crisis.**

The external surplus of the Hungarian economy is expected to increase further in 2013, before stabilising at a high level in 2014, reflecting the further gradual rise in net exports and the increased use of EU transfers. The country's external liabilities and debt are likely to continue to fall as the external balance improves further, which may contribute to a reduction in Hungary's external vulnerability.

The government deficit on an accrual basis is expected to remain below 3 per cent of GDP both in 2013 and 2014. Gross government deficit is likely to remain on a downward path over the forecast period and fall below 78 per cent by 2014.

**In the Council's judgement, the achievement of the medium-term inflation target and the condition of the real economy allow further cautious monetary policy easing.**

In the Council's view, the economic data becoming available in the first half of the year suggest that weak domestic demand and slack in the labour market have a strong disciplinary effect on economic agents' price and wage-setting decisions, while temporary effects have also contributed to a reduction in inflation this year. The tax-adjusted inflation rate is expected to remain below 3 per cent over the medium term – the direct upward effect on prices of the Government's tax measures is outside the influence of monetary policy. The low inflation environment may help to better anchor the nominal path of the real economy to the Bank's inflation target. Looking ahead, the output of the Hungarian economy is likely to return to its potential level only gradually, which suggests that inflationary pressures will remain moderate as the temporary effects dissipate. The latter will also be supported by developments in underlying inflation and the subdued rate of earnings growth. The Council judges that the medium-term achievement of the inflation target and the position of the real economy warrant further monetary policy easing. However, changes in risk perceptions represent a risk in terms of the room for manoeuvre in monetary policy.

**There is significant uncertainty surrounding future developments in the macroeconomy and financial markets.**

In the Council's judgement, the degree of spare capacity in the economy and the global financial market environment are the two most important sources of uncertainty for monetary policy.

The potential output of the Hungarian economy has been growing at a slow rate since the onset of the crisis, reflecting the decline in investment and the existing financing constraints; however, there continues to be a considerable degree of uncertainty surrounding the size of available capacity that could be brought into production. If productive capacity has been damaged to a smaller extent, then the path of potential output may be higher and the cyclical position of the economy may be wider. With a wider cyclical position, the ability of companies to pass on cost shocks into prices is more limited and the inflationary impact of cost shocks to companies is smaller, which, in turn, may warrant a further substantial easing of policy.

In the Council's view, global financial markets have become more fragile recently. Developments related to the quantitative easing programmes implemented by leading central banks will be key in sustaining the supportive financial market environment. A further uncertainty arises from the possibility that the euro area recession will be more prolonged despite

the significant efforts by European institutions. A marked deterioration in the financial environment may limit the room in which monetary policy can manoeuvre.

**Based on the above considerations, the Monetary Council has decided to reduce the base rate by 25 basis points.**

In the Council's judgement, there remains a significant degree of spare capacity in the economy, inflationary pressures are likely to remain moderate in the medium term, and therefore the 3 per cent target can be met with looser monetary conditions. However, the global financial market environment has been volatile recently. A sustained and marked shift in perceptions of the risks associated with the economy may influence the room for manoeuvre in monetary policy. The Council judges that as long as the outlook for inflation and the real economy justifies it, interest rates can be reduced further; however, increased caution is warranted in the volatile and rapidly changing global environment.

<b>Summary table of baseline scenario</b>			
<i>(our forecast is based on endogenous monetary policy)</i>			
	2012	2013	2014
	Fact	Projection	
<b>Inflation (annual average)</b>			
Core inflation <sup>1</sup>	5.1	3.8	4.2
Core inflation without indirect tax effects	2.5	1.9	3.1
Consumer price index	5.7	2.1	3.2
<b>Economic growth</b>			
External demand (GDP based) <sup>2</sup>	0.8	0.4	1.8
Household consumption expenditure	-1.4	0.1	0.6
Gross fixed capital formation	-3.8	-3.1	5.1
Domestic absorption	-3.7	-0.2	1.2
Export	2.0	2.3	5.0
Import	0.1	1.7	4.9
GDP	-1.7	0.6	1.5
<b>External balance<sup>3</sup></b>			
Current account balance	1.6	3.3	3.7
External financing capacity	4.4	6.6	6.0
<b>Government balance<sup>3, 8</sup></b>			
ESA balance (data for 2012 is preliminary data)	-2.0	-2.7	-2.5
<b>Labour market</b>			
Whole-economy gross average earnings <sup>4, 6</sup>	4.5	3.0	5.0
Whole-economy employment	1.7	-0.2	0.3
Private sector gross average earnings <sup>5</sup>	7.2	3.5	3.0
Private sector employment	1.4	-0.6	0.4
Unit labour costs in the private sector <sup>6</sup>	7.5	1.5	1.7
Household real income <sup>7</sup>	-3.2	0.4	0.3

<sup>1</sup> From May 2009 on, calculated according to the joint methodology of the CSO and MNB.

<sup>2</sup> In line with the changes in Hungarian export structure by destination countries we revised the weights in our external demand indicator.

<sup>3</sup> As a percentage of GDP.

<sup>4</sup> Calculated on a cash-flow basis.

<sup>5</sup> According to the original CSO data for full-time employees.

<sup>6</sup> Private sector unit labour costs calculated with a wage indicator excluding the effect of whitening and the changed seasonality of bonuses.

<sup>7</sup> MNB estimate.

<sup>8</sup> With complete cancellation of free reserves.

# 1 Inflation and real economy outlook

According to the data received in recent months, macroeconomic developments were in line with the most important behavioural stories outlined in the March issue of the *Quarterly Report on Inflation*. The significant one-off effects affecting last year's growth were corrected in accordance with our expectations. Accordingly, the growth observed in Q1 was strong even in international comparison. Corporate profitability started to improve. Companies' opportunities to increase prices are limited in the subdued demand environment, and thus firms exhibited strong cost-side adjustment. Accordingly, wage dynamics in the private sector remained subdued by historical standards. Inflation continued to decline, owing to the favourable cost shocks and the price-reducing effect of weak domestic demand. Thus, nominal developments in the economy were even more favourable than our expectations.

Perceptions of risk associated with domestic assets have improved since the March forecast. The decision by the Economic and Financial Affairs Council (ECOFIN) to lift the excessive deficit procedure against Hungary may have contributed to the fall in risk premia. However, the contrast between financial market developments and macroeconomic outlook remained on the global markets. Therefore, supportive external investor sentiment may be fragile, as highlighted by the rising volatility of risk indicators in recent weeks.

According to our forecast, domestic GDP may continue to expand in the quarters ahead. In Hungary's export markets, demand may slowly recover from its trough, although it may be less favourable than our earlier expectations. The gradual reduction of debts accumulated before the crisis may remain a dominant factor in the evolution of domestic demand, while the demand effect of fiscal policy may remain neutral. The Funding for Growth Scheme may improve corporate credit conditions from the middle of this year. Following correction of the one-off effects at the end of last year, growth may continue at a slower rate compared to the first quarter and then gradually strengthen. Overall, we expect a growth path similar to the March forecast.

Over the short run, Hungary's economic growth may be driven by exports. Our most important trading partner, the euro area, is expected to remain in recession this year, and thus economic activity in our external markets is expected to only pick up from the end of the year. However, increasing production from new capacities in the automobile industry may add to the market share of Hungarian exports even if external demand is weak. The expected correction of agricultural output may contribute significantly to this year's growth, following the poor harvest by historical standards last year.

Domestic demand may remain subdued this year. While expanding real incomes point to an increase in consumption, in light of the reduction in accumulated debts, uncertain medium-term prospects and tight credit conditions, we only expect consumption to stabilize this year following a continuous decline in recent years. An upturn in consumption may occur in 2014, as the labour market environment improves.

As the impact of the large automotive industry investments tapers off, corporate investment may decline this year. Low capacity utilisation, weak profitability and the uncertain outlook for demand are factors restraining investment activity. This year, their effects may primarily be offset by public investment implemented from European Union funds, the first signs of which are confirmed by construction data showing growth in recent months. From the end of this year, the Funding for Growth Scheme may support the investment performance of small and medium-sized enterprises.

We project activity in the labour market to continue increasing. Due to the price-reducing effect of the subdued demand environment, companies mainly attempt to improve their profitability by keeping wage costs under control. Accordingly, private sector labour demand may remain moderate over the short run, and increasing labour supply may mostly appear in the public employment programmes. Starting from 2014, we expect to see a tangible upswing in employment and a

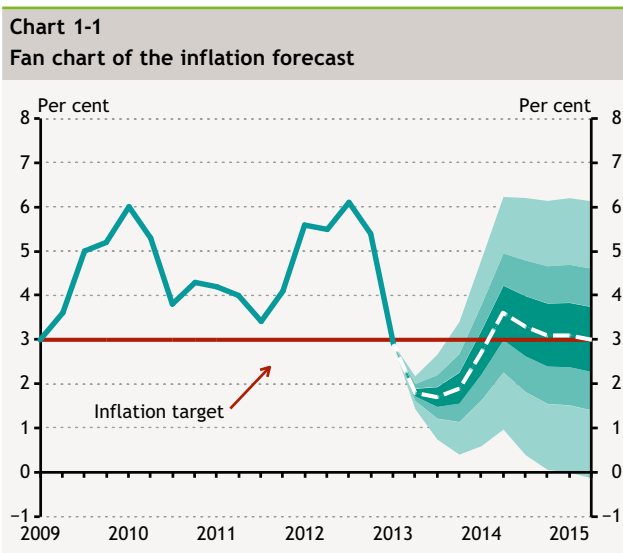
decline in the unemployment rate, in parallel with stronger economic activity, possibly supported by continued low wage dynamics as well. The loose labour market conditions have a strong wage-reducing effect over the entire forecast horizon. The gradual adjustment of inflation expectations may also help to keep wage growth moderate.

Inflation is projected remain well below the 3 per cent target this year and be close to the target in 2014. Inflation excluding indirect taxes may remain below 3 per cent over the entire forecast horizon. Favourable cost-side developments (the decline in oil prices and modest increases in other commodity prices) as well as the reduction in regulated prices contribute to low inflation. Spare capacities in the economy over the entire forecast horizon limit the pass-through of production cost-increasing tax measures into consumer prices.

Domestic macroeconomic developments point to an easing of monetary conditions. At the same time, there has been increased volatility in risk premia in recent weeks. The volatility characterising external market sentiment highlights the fragile external environment. The macroeconomic factors determining the interest rate path consistent with the baseline projection point in one direction in terms of the interest rate response. Inflation below the 3 per cent target and the steadily negative output gap both allow for looser monetary conditions than the present ones. The increase in risk indicators observed in recent weeks may limit the room for manoeuvre in monetary policy, and thus it is justified to maintain caution in reaching a lower interest rate level.

# 1.1 Inflation forecast

Over the short run, inflation is expected to be lower than our March forecast, mainly reflecting favourable cost-side developments. Core inflation may remain low in the coming quarters due to the price-reducing effect of weak domestic demand and the start of adjustment in the corporate sector. However, from 2014 the production cost-increasing effect of earlier tax measures may be manifested in a slow rise in core inflation, in parallel with a pick-up in consumption demand and gradual narrowing of the output gap. Pass-through to consumer prices can only be partial in the light of the continuing corporate cost adjustment. The sustainability of the low inflation environment may also be supported by steadily subdued wage dynamics in the medium term.



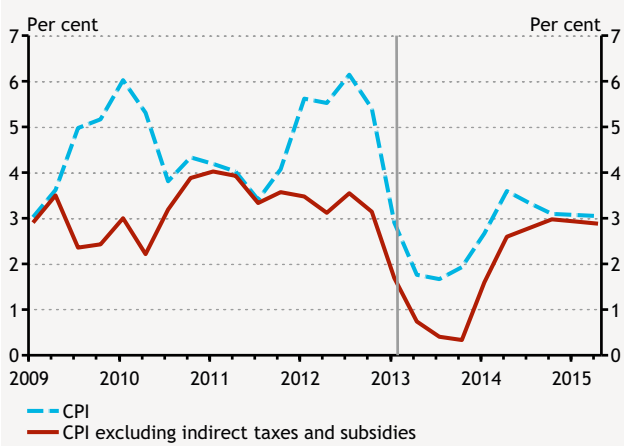
Based on the data in recent months, inflation this year is expected to be lower than our March forecast, both in terms of core inflation and non-core inflation items (Chart 1-1). A significant portion of the difference is explained by cost-side factors. Oil prices declined considerably in the past quarter, while increases in other commodity prices were below our expectations. At the same time, moderate traded inflation also contributed to the difference, indicating that underlying inflation may also be more favourable.

The real economy may be characterised by significant spare capacities over the entire forecast horizon. The negative output gap may only close slowly and gradually. Accordingly, companies' cost-side adjustment may continue to dominate corporate sector behaviour. The possibility of increasing consumer prices is limited due to the subdued consumption demand, and consequently improving profitability requires moderate wage hikes and increasing productivity. In the second half of the forecast horizon, however, consumption demand may pick up and the output gap may close gradually. In the improving demand environment, the effect of tax measures<sup>1</sup> causing higher production costs may appear in consumer prices, but only to a limited extent (Chart 1-2 and 1-3).

Price increases for non-core inflation items may remain subdued over the entire forecast horizon. Slower inflation in fuel and administrative energy prices hinders the rate of increase in this product group. The fall in oil prices expressed in forint terms resulted in a decline in fuel prices

<sup>1</sup> Mainly the telecommunications tax, the financial transaction levy and the electronic road toll to be introduced. Although these taxes mostly replaced earlier taxes on companies, they are of a different nature compared to the types of taxes replaced. The earlier, sectoral surtaxes were introduced temporarily and did not depend on developments in demand. In economic terms they were similar to lump sum taxes, which – theoretically – do not influence market prices. By contrast, the new types of taxes are permanent and determined as a proportion of turnover. Therefore, in our forecast, we expect that service providers will pass the new taxes on to the corporate sector, which will lead to an increase in production costs.

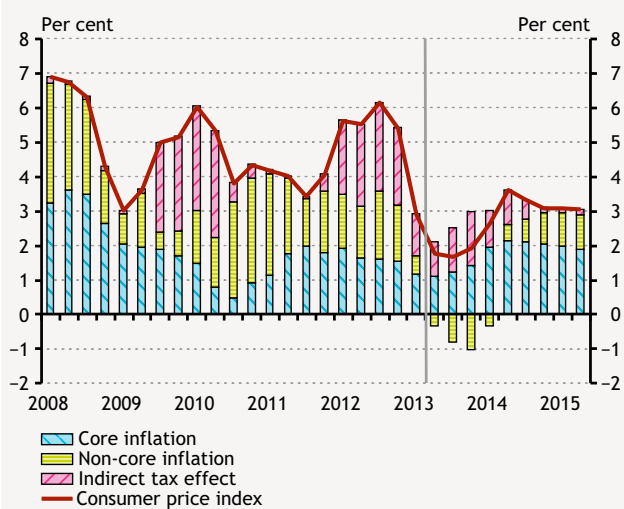
**Chart 1-2**  
CPI forecast  
(2009 Q1–2015 Q2)



at the beginning of the year. Based on future prices, the price of oil might remain close to USD 100 in the years to come. The effect of last year’s rise in raw food prices on unprocessed food inflation may gradually fade this year. With the appearance of the new harvest in the middle of this year, food prices are expected to return to normal.

The consumer price index is affected by various government measures over the forecast horizon. Over the short run, inflation will continue to decline as the reduction in regulated prices of water, refuse disposal and sewerage enters into force from July. However, the increase in the retail margin on tobacco products may result in a rise in the consumer price level (see Box 1-1), while in case of financial services, the increase of the rate of the financial transaction levy may have inflationary effects. The latter may have an impact of 0.1 and 0.2 percentage points on the 2013 and 2014 CPI, respectively. Even taking into account these effects, the direct impact of government measures on inflation may be significantly lower than the average observed since the early 2000s (Table 1-1).

**Chart 1-3**  
Decomposition of the inflation forecast  
(2008 Q1–2015 Q2)



As a result of the price-reducing effect of weak domestic demand and the significant decline in regulated prices, inflation may decline to nearly 2 per cent this year. In the second half of the forecast horizon, as consumption demand picks up the price-reducing effect of conditions in the real economy may fade. Households’ inflation expectations respond particularly sensitively to changes in administered prices. This year, low inflation and the increasingly stronger disciplinary effect of the government’s administered price decisions may contribute to a reduction in inflation expectations. This may help to sustain the low inflation environment over the medium term via lower wage expectations and moderate wage dynamics.

As a result of all these factors, inflation is forecasted to be close to 3 per cent in 2014. Inflation excluding indirect taxes may remain slightly below 3 per cent in 2014 as well.

**Table 1-1**  
Details of the inflation forecast

		2011	2012	2013	2014
<b>Core inflation</b>		2.7	5.1	3.8	4.2
<b>Non-core inflation</b>	Unprocessed food	4.3	6.8	5.6	3.1
	Gasoline and market energy	13.8	11.9	-1.5	0.7
	Regulated prices	4.0	4.7	-3.1	1.0
	Total	6.4	6.8	-1.2	1.2
<b>Consumer price index</b>		3.9	5.7	2.1	3.2



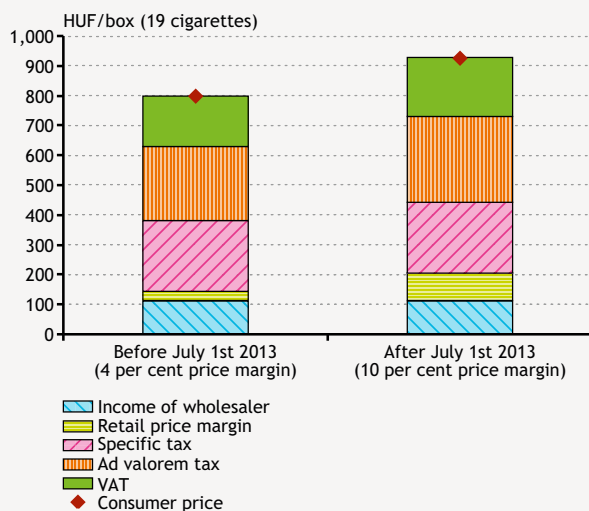
**Box 1-1****Anticipated inflationary consequences of the measures affecting the retail margin on cigarettes**

Significant changes will take place in tobacco retail trade in Hungary as of 1 July. In the new system, sales of cigarettes will only be allowed in so-called National Tobacco Shops. The law only allows for sales of a limited scope of other products in these shops. Therefore, the government intends to ensure higher profitability for these shops, instead of the 4-5 per cent margin that has been typical to date in tobacco retail trade. The retail margin will be 10 per cent of the retail price.

This size of increase in the margin may entail a substantial rise in the price of cigarettes, resulting in a significant inflationary effect. Below is a summary of the components of the price of cigarettes and a presentation of the expected effects of increasing the margin from 4 per cent to 10 per cent on the overall CPI.

**Chart 1-4**

**The development in the price and price structure of one packet of cigarettes in the case of different retail margins**



The state imposes significant taxes on cigarette consumption, so the price of cigarettes is influenced by various types of taxes (Chart 1-4). The specific excise tax is HUF 12,500/1000 cigarettes, i.e. HUF 238/one packet containing 19 cigarettes. This means that the specific tax does not depend on the price of the cigarette. By contrast, the other part of the excise tax, the ad valorem tax amounts to 31 per cent of the retail price of the cigarette that contains taxes as well, i.e. it depends on the price.<sup>2</sup> The average consumer price of one packet of cigarettes is close to HUF 800; in the case of this price the value tax is HUF 248/packet. The usual 27 per cent VAT applies to cigarettes as well; with a price of HUF 800, the VAT is around HUF 170/packet. The HUF 144 remaining on a packet after taxation is shared by the wholesaler and the retailer. With a 4 per cent retail margin (to be calculated from the price including taxes), the retailer earns HUF 32/packet, while the wholesaler's income is HUF 112/packet. Increasing the margin from 4 to 10 per cent may cause a significant rise in the overall CPI, as the ad valorem tax and the VAT amplify the effect of increasing the margin. Assuming that the wholesaler does not change his own income, our calculations suggest that a 10 per cent margin may result in an approx. 16 per cent increase in cigarette

prices. Taking account of the high weight of cigarettes (approx. 4 per cent) in the consumer basket, this may result in a total inflationary effect of 0.6 percentage points, divided roughly equally between 2013 and 2014 (the exact distribution depends on the pace of the pass-through of the increase in the margin in consumer prices; if the pass-through is slower, more of it will occur next year).

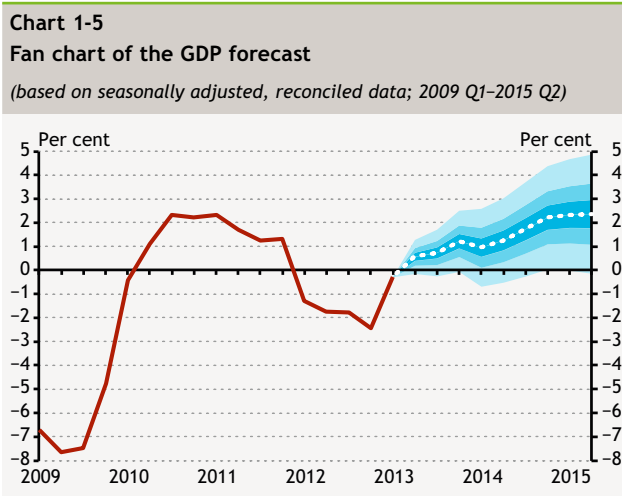
It is important to emphasise that the above calculation is based on the assumption that the wholesaler does not intend to reduce his own income. The magnitude of the price rise may be smaller if the wholesaler 'swallows' some of the price rise, i.e. the increase in the retailer's margin is followed by a decrease in the wholesaler's income. However, its size may be more limited because only a smaller portion of the wholesaler's income is profit; the rest is the cost related to the production and distribution of the cigarette. This measure can be considered as a one-off that cause a temporary inflationary effect in a small part of the consumer basket. As its nature is quite similar to an excise tax hike, the direct inflationary effect does not call for a monetary policy reaction.

<sup>2</sup> If the sum of the specific tax and the ad valorem tax does not reach the so-called minimum tax of HUF 24,920/1000 cigarettes, the minimum tax is charged. At the current prices, the excise tax exceeds the minimum tax for most cigarettes.

## 1.2 Real economy forecast

After the recession last year, the Hungarian economy started to grow again in Q1. In the quarters ahead the expansion of Hungarian GDP may continue at a slower pace than early in the year. Growth may be driven by exports over the short run: as a result of the new automotive industry capacities, the market share of Hungarian exports may increase even despite weak external demand. The correction of agricultural output may also contribute significantly to the pick-up in growth this year, following the poor harvest by historical standards last year. Households' real incomes may increase considerably this year, but because of the reduction in accumulated debts, tight credit conditions and precautionary motives we only expect stabilization in consumer demand. An increase in consumption may take place in 2014, in parallel with an improvement in labour market conditions. Corporate investment may decline this year with investment projects in the automotive industry come to end, but may start to increase again from next year on. In the case of small and medium-sized enterprises, the Funding for Growth Scheme might bring a significant improvement in credit conditions, supporting the investment activity in the corporate sector. Overall, domestic demand may expand substantially only in 2014, and thus coupled with the expected recovery of external markets, a more balanced growth path may be seen in 2014.

On the entire forecast horizon, the economy may be characterised by significant spare capacities, and the negative output gap may close only gradually.

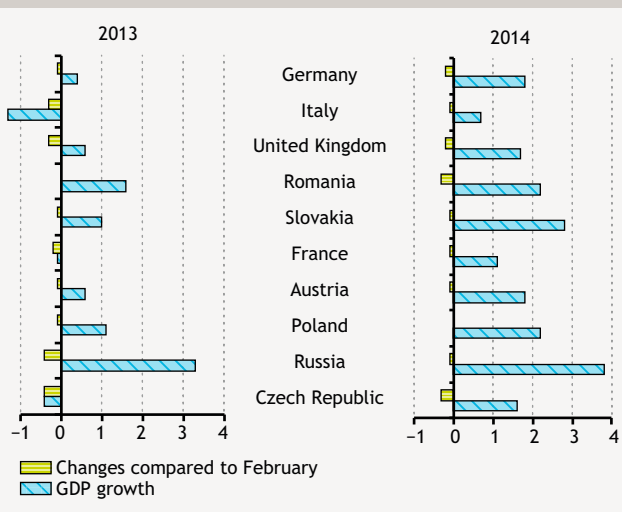


Significant one-off factors contributed to the previous year's recession (primarily developments in industrial and agricultural production). The correction of these effects started in the first three months of the year, in line with our expectations. Underlying growth trends, however, have only shown moderate improvement so far.

Looking ahead, compared to our previous expectations, our forecast may be influenced by contrasting factors. In the first quarter of 2013, lower-than-expected economic growth was observed in the majority of Hungary's main export markets and therefore the assumed turning-point in external demand may come later. As a result of the fiscal stabilization measures taken to sustainably achieve the deficit target of 3 per cent, the aggregate fiscal impulse may be lower compared to our previous expectations. On the other hand, the Funding for Growth Scheme may gradually improve corporate credit conditions from mid-year on, while the historically low inflation may increase consumption via households' real income growth. Growth in the coming quarters is expected to continue at a slower pace than at the beginning of the year and may then strengthen in the second half of the year with a pick-up in Hungary's export markets and the emerging impacts of the Funding for Growth Scheme (Chart 1-5).

The global economy has slowed down tangibly in recent quarters. The persistently high levels of unemployment and

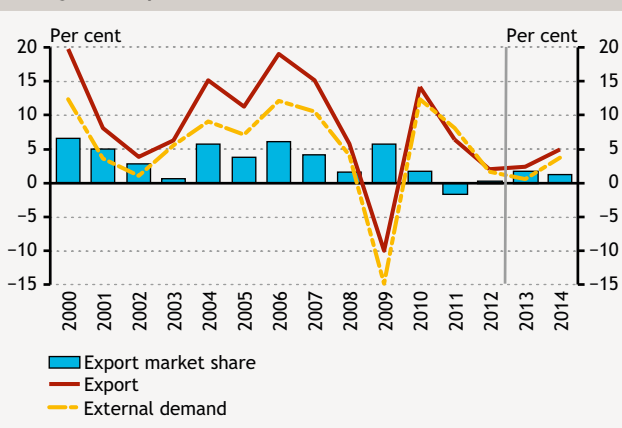
**Chart 1-6**  
Changes in the European Commission's forecast of economic growth in Hungary's main export markets



still significant balance sheet adjustments are depressing overall demand conditions. The subdued demand environment is occurring in parallel across multiple economic regions, reducing the effectiveness of expansive economic policies. The turning point in our main export markets, which was previously expected to occur around mid-year, may be further postponed. All major international institutions have continuously revised down their forecasts for growth in Hungary's main export partners. According to international projections, the likelihood of a "three-speed" recovery process has increased (Chart 1-6), in which our most important export market, the EU shows the lowest potential for growth.<sup>3</sup>

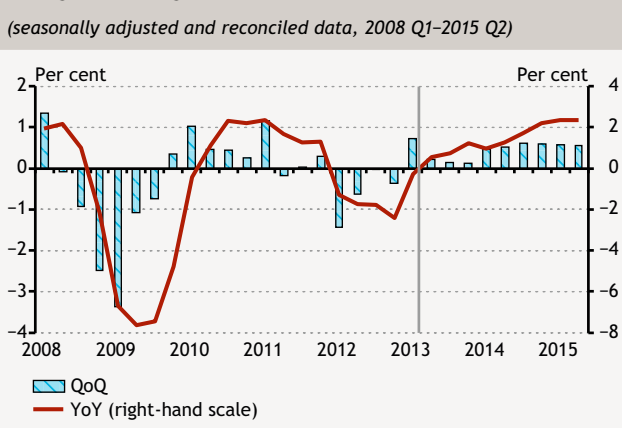
The less favourable external demand outlook may negatively affect Hungary's export performance. At the same time, the increase in the production of the new automotive capacities from this year on may add substantially to Hungary's export market share. As a result, economic growth in Hungary may be driven by net exports over the short run, despite the weaker external demand. Exports are expected to expand substantially in 2014, in parallel with the recovery in EU growth (Chart 1-7).

**Chart 1-7**  
Changes in export market share



Domestic demand may remain subdued this year. Given the low inflation environment, real household income is expected to grow. Real income growth may be stronger in the low-income households characterized by higher consumption rates (such as below-average wage earners or pensioners; see Box 1-2). The reduction in debts built up prior to the crisis, precautionary considerations stemming from the uncertain prospects for economic activity and the consistently tight credit conditions may continue to hinder expansion in consumption. As a result of these two opposing effects, the decline in consumption observed in recent years may halt this year, we expect the consumption demand to stabilize.

**Chart 1-8**  
Changes in GDP growth

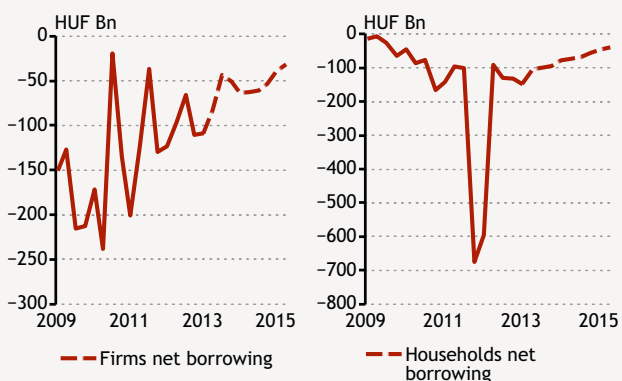


The strength of precautionary considerations is mostly affected by the employment situation. Consequently, an upturn in consumption may take place from 2014, in parallel with improvement in the labour market environment. The financial saving rate may remain at the high level observed in recent years (Chart 1-10).

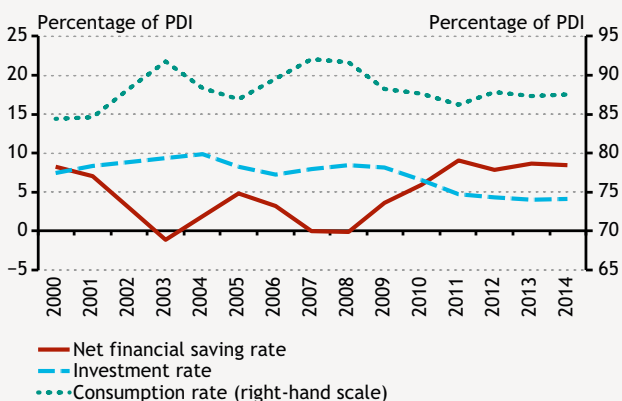
Against the backdrop of low capacity utilisation, weak profitability, uncertain prospects for aggregate demand and tight credit conditions, corporate investment activity may remain subdued over the short term. Corporate investment may decline in 2013, as large investment projects in the

<sup>3</sup> IMF World Economic Outlook, April 2013.

**Chart 1-9**  
Forecast for household and corporate lending  
(2009 Q1–2015 Q2)

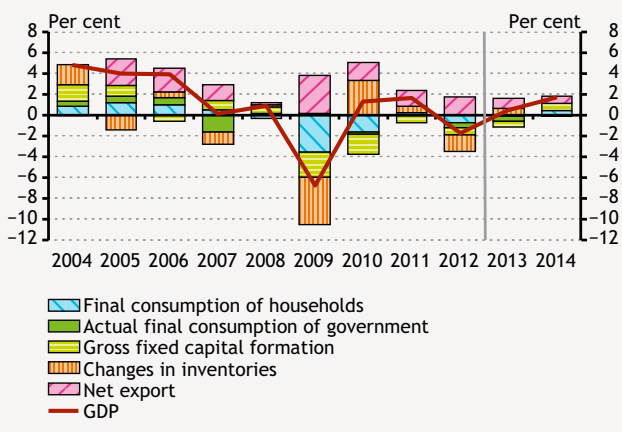


**Chart 1-10**  
Use of household income  
(2000 Q1–2014 Q2)



Note: As percentage of disposable income. Net financial savings of households exclude mandatory contributions payable to the private pension funds.

**Chart 1-11**  
Changes in GDP growth  
(2004–2014)



automobile industry come to an end. From the middle of this year, the Funding for Growth Scheme may significantly mitigate the credit supply constraints experienced in the sector of small and medium-sized enterprises. According to our assumption, the majority of the loans extended under the first pillar of the Scheme may be used for refinancing earlier loans; nevertheless, approximately one-third of the first pillar may contribute to newly issued credits (see Special topic 6.1). As a result of the FGS, investments of eligible enterprises may increase in 2014 (Chart 1-9). Primarily, those investments are expected to be realized that were deferred in recent years, or aim to increase the cost-effectiveness of production.

Due to the consistently tight credit conditions and households' cautious behaviour, no major turnaround in trends in the housing market is expected in the coming years. The deferral of investment activity continues to remain an important channel of adjustment.

In line with the increasing utilisation of EU funds, public investment may grow considerably over the entire forecast horizon. Overall, following this year's decline, the downward trend in investment seen since 2008 is expected to stop, and investment may expand from 2014.

This year, growth in inventories may also make a substantial positive contribution to domestic growth. The increase in inventories relative to last year is expected to stem primarily from the better agricultural yields and from the rebound in industrial production.

Over the short run, net exports may continue to be the dominant contributor to Hungarian economic growth. In 2014, in parallel with a pick-up in domestic demand, the structure of growth may become more evenly balanced (Chart 1-11).

The economy still may be characterized by a significant amount of spare capacities. Our view of the potential output and the output gap has remained unchanged since the March issue of the *Quarterly Report on Inflation*. In our current forecast, output only gradually approaches its potential level and consequently, the output gap has a disinflationary effect over the entire forecast horizon.

**Box 1-2**

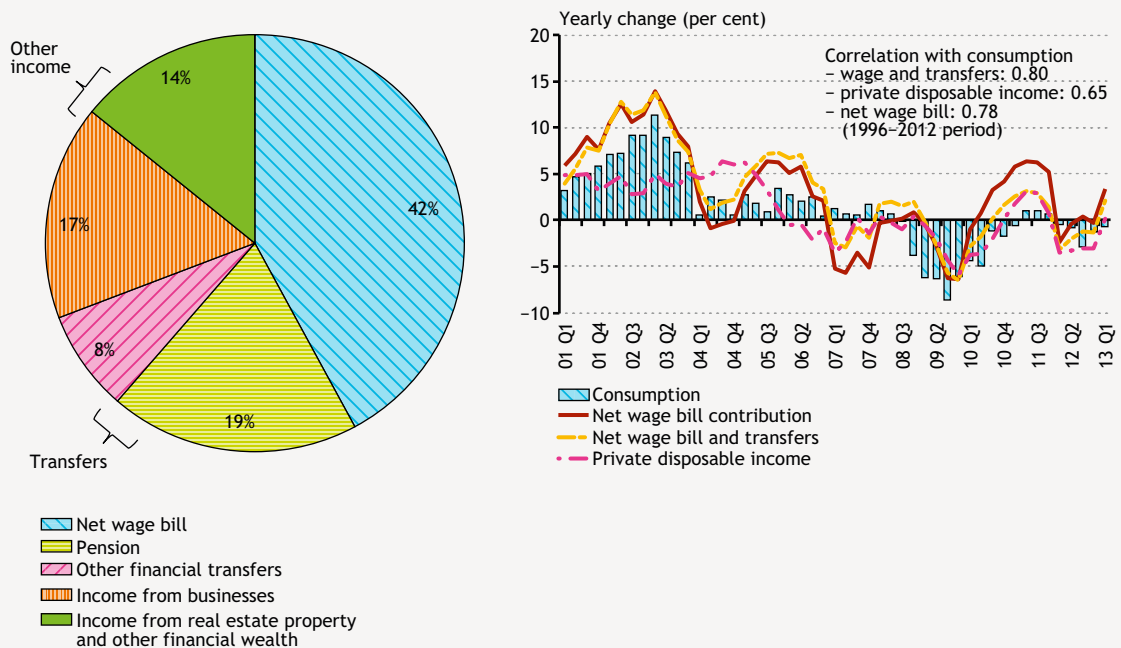
**Relationship between household income and consumption demand**

A common assumption of theories dealing with household consumption behaviour is that a close relationship may exist between household income and consumption. Analysing domestic data, there are large differences in terms of the volatility of the various components of income and their relationship with household consumption expenditure. Consequently, along with changes in total income, the different dynamics of individual income components can have an impact on expected consumption demand. At around 40 per cent, labour income (net wage bill) account for the largest part of aggregate household income. In addition, financial transfers received from general government and other income account for an equal share (Chart 1-12, left panel).

Examining the co-movement of the individual components of income and consumption expenditure, the indicators derived from the sub-components show a much closer relationship than the indicator of aggregate income. Core income (the sum of net wage bill and financial transfers received from general government) exhibits the highest degree of co-movement (Chart 1-12, right panel). This observation is consistent with the theory found widely in the literature, namely the permanent income hypothesis: it is mainly changes in the labour market situation and government measures that may be determinant for the longer-term outlook for income, and therefore consumption appears to respond mostly to changes in these (Chart 1-12, left panel). In contrast to wage and transfer income, other incomes show a higher degree of volatility. The reason for this is that a larger part of other incomes derives from sectors with uncertain output (e.g. agriculture) and that the volatility of financial assets may also strongly influence their development.

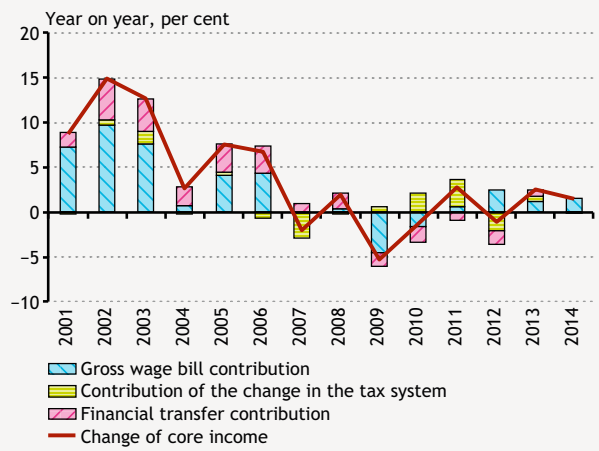
Over the forecast horizon, low inflation generally raises the purchasing power of core income, the most important factor for household consumption behaviour. The 5.2 per cent increase in pensions and the 5.4 per cent increase in the minimum wage, as well as the change to the personal income tax regime (phasing out of the half super gross tax base) is likely to lead to a significant rise in incomes this year (Chart 1-13). It is mainly households with a higher consumption rate and belonging to the lower income deciles that are likely to earn these extra incomes. Consequently, over the forecast horizon the structure of growth in real incomes points to a strengthening in consumption demand in several respects.

**Chart 1-12**  
Types of household income and the correlation between consumption and incomes



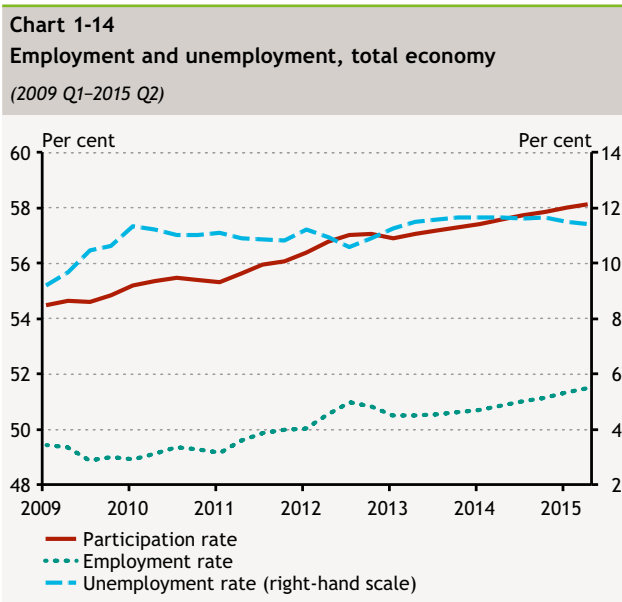
Despite the strong impact on incomes, consumption is only likely to recover gradually in the short term. With high indebtedness and uncertain income prospects, households may remain cautious in spending their income. A sustained improvement in labour market conditions may contribute to an easing in precautionary motives, and therefore a perceptible increase in consumption is expected to materialise from 2014.

**Chart 1-13**  
**Decomposition of the annual increase in core income**



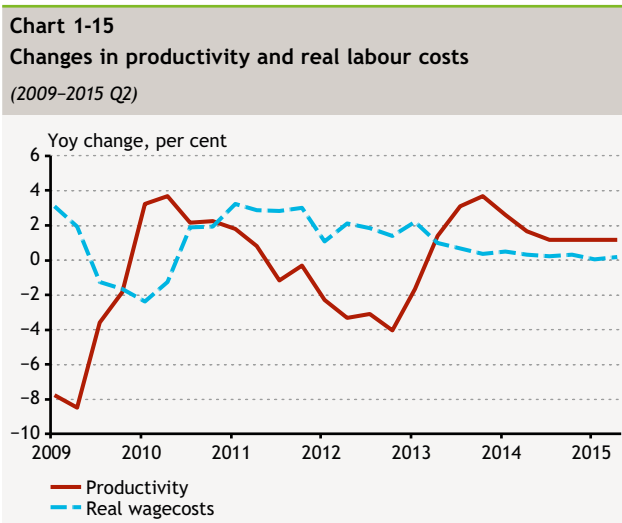
## 1.3 Labour market forecast

As a result of subdued demand conditions, the profitability of the corporate sector decreased noticeably in 2012. Therefore, we expect a gradual restoration of profitability over the projection horizon and the related strengthening of adjustment effects. Due to the strong price-reducing effect of subdued demand, to improve their income position, companies are mainly likely to continue to restrain their production costs. Adjustment at the enterprise level, the loose labour market environment and weaker inflation expectations may jointly result in restrained wage dynamics over the entire projection horizon. Over the short run, the further increase in labour supply may primarily add to public employment, whereas employment in the private sector may expand and unemployment may decline from 2014, in parallel with an improvement in economic activity.



As a result of the recession in 2012, companies' profitability declined substantially. Data received since the beginning of the year confirmed that – in line with our March forecast – the restoration of profitability had started. In the weak demand environment, adjustment in consumer prices may be limited; therefore, more emphasis may remain on keeping wage and other costs under control in the improvement in profitability.

In accordance with this, only moderate increases in private sector gross earnings in the income categories above the minimum wage were seen at the beginning of the year. Even looking ahead, the restoration of corporate profitability necessitates moderate wage dynamics and improving productivity, the development of which may also be supported by the wage-reducing effect of the persistently loose labour market environment as well. Looking ahead, we expect that inflation expectations will also remain at a low level as a result of the currently low inflation, which may help to keep wage increases restrained over the medium term as well (Chart 1-15).



According to our forecast, the increase in activity, which has lasted for years, may continue (Chart 1-14). Over the short run, the effect of increasing labour supply may mostly appear in public employment programmes. Corporate sector labour demand may remain subdued this year. due to the improvement of profitability, even though the lower wage dynamics helps companies to keep the current labour force. The preservation of employment may be facilitated, if other channels of adjustment are available for companies, instead of lay-offs. The new Labour Code makes it easier to apply flexible forms of employment, consequently facilitating adjustment on the intensive margin (i.e. in working hours). Employment in the private sector may expand again in 2014, in parallel with improving economic activity.

**Table 1-2**  
**Changes in our projections compared to the previous Inflation report**

	2012	2013		2014	
	Fact	Projection			
		March	Current	March	Current
<b>Inflation (annual average)</b>					
Core inflation <sup>1</sup>	5.1	4.0	3.8	3.4	4.2
Core inflation without indirect tax effects	2.5	2.4	1.9	3.2	3.1
Consumer price index	5.7	2.6	2.1	2.8	3.2
<b>Economic growth</b>					
External demand (GDP-based) <sup>2</sup>	0.8	0.5	0.4	1.8	1.8
Household consumer expenditure	-1.4	-0.4	0.1	1.0	0.6
Government final consumption expenditure	-2.3	-1.4	-1.9	-0.5	0.1
Fixed capital formation	-3.8	-1.4	-3.1	2.1	5.1
Domestic absorption	-3.7	-0.6	-0.2	0.8	1.2
Export	2.0	2.8	2.3	5.4	5.0
Import	0.1	1.9	1.7	4.9	4.9
GDP	-1.7	0.5	0.6	1.7	1.5
<b>External balance<sup>3</sup></b>					
Current account balance	1.6	3.3	3.3	4.2	3.7
External financing capacity	4.4	6.5	6.6	6.5	6.0
<b>Government balance<sup>3, 8</sup></b>					
ESA balance (data for 2012 is preliminary data)	-2.0	-2.9	-2.7	-2.9	-2.5
<b>Labour market</b>					
Whole-economy gross average earnings <sup>4, 6</sup>	4.5	3.7	3.0	6.2	5.0
Whole-economy employment	1.7	-0.1	-0.2	0.5	0.3
Private sector gross average earnings <sup>5</sup>	7.2	4.2	3.5	3.0	3.0
Private sector employment	1.4	-0.9	-0.6	0.6	0.4
Private sector unit labour cost <sup>6</sup>	7.5	1.4	1.5	1.6	1.7
Household real income <sup>7</sup>	-3.2	0.1	0.4	0.6	0.3

<sup>1</sup> From May 2009 on, calculated according to the joint methodology of the CSO and MNB.

<sup>2</sup> In line with the changes in Hungarian export structure by destination countries we revised the weights in our external demand indicator.

<sup>3</sup> As a percentage of GDP.

<sup>4</sup> Calculated on a cash-flow basis.

<sup>5</sup> According to the original CSO data for full-time employees.

<sup>6</sup> Private sector unit labour costs calculated with a wage indicator excluding the effect of whitening and the changed seasonality of bonuses.

<sup>7</sup> MNB estimate.

<sup>8</sup> With complete cancellation of free reserves.



**Table 1-3**  
**MNB baseline forecast compared to other forecasts**

	2012	2013	2014
<b>Consumer Price Index (annual average growth rate, %)</b>			
MNB (June 2013)	5.7	2.1	3.2
Consensus Economics (June 2013) <sup>1</sup>	5.7	1.6 – 2.2 – 2.5	2.0 – 2.7 – 3.0
European Commission (May 2013)	5.7	2.6	3.1
IMF (May 2013)	5.7	3.2	3.5
OECD (May 2013)	5.8	2.8	3.5
Reuters survey (May 2013) <sup>1</sup>	5.7	1.6 – 2.3 – 4.0	1.6 – 3.0 – 5.9
<b>GDP (annual growth rate, %)</b>			
MNB (June 2013)	-1.7	0.6	1.5
Consensus Economics (June 2013) <sup>1</sup>	-1.7	-0.5 – 0.3 – 1.0	1.0 – 1.3 – 1.7
European Commission (May 2013)	-1.7	0.2	1.4
IMF (May 2013)	-1.7	0.0	1.2
OECD (May 2013)	-1.8	0.5	1.3
Reuters survey (May 2013) <sup>1</sup>	-1.7	-0.5 – 0.3 – 1.0	1.0 – 1.3 – 1.7
<b>Current account balance<sup>3</sup></b>			
MNB (June 2013)	1.6	3.3	3.7
European Commission (May 2013)	2.3	3.3	3.6
IMF (May 2013)	1.7	2.1	1.8
OECD (May 2013)	1.5	2.4	3.2
<b>Budget deficit (ESA-95 method)<sup>3, 4</sup></b>			
MNB (June 2013)	2.0	2.7	2.5
Consensus Economics (June 2013) <sup>1</sup>	1.9	2.7 – 2.9 – 3.5	2.5 – 3.1 – 4.0
European Commission (May 2013)	1.9	3.0	3.3
IMF (May 2013)	2.5	3.2	3.4
OECD (May 2013)	2.0	2.8	3.2
Reuters survey (May 2013) <sup>1</sup>	1.9	2.7 – 2.9 – 3.5	2.7 – 3.1 – 4.0
<b>Forecasts on the size of Hungary's export markets (annual growth rate, %)</b>			
MNB (June 2013)	1.7	1.5	4.2
European Commission (May 2013) <sup>2</sup>	1.7	1.6	5.2
IMF (May 2013) <sup>2</sup>	1.7	1.7	3.9
OECD (May 2013) <sup>2</sup>	0.4	1.2	4.5
<b>Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)</b>			
MNB (June 2013)	0.8	0.5	1.8
European Commission (May 2013) <sup>2</sup>	0.8	0.6	1.9
IMF (May 2013) <sup>2</sup>	0.8	0.7	1.8
OECD (May 2013) <sup>2</sup>	0.6	0.5	1.8

<sup>1</sup> For Reuters and Consensus Economics surveys, in addition to the average value of the analysed replies (i.e. the medium value), we also indicate the lowest and the highest values to illustrate the distribution of the data.

<sup>2</sup> Values calculated by the MNB; the projections of the named institutions for the relevant countries are adjusted with the weighting system of the MNB, which is also used for the calculation of the bank's own external demand indices. Certain institutions do not prepare forecast for all partner countries.

<sup>3</sup> As a percentage of GDP.

<sup>4</sup> With complete cancellation of free reserves.

Sources: Eastern Europe Consensus Forecasts (Consensus Economics Inc. [London], June 2013); European Commission Economic Forecasts (May 2013); IMF World Economic Outlook Database (April 2013); Reuters survey (May 2013); OECD Economic Outlook, No. 93 (May 2013).

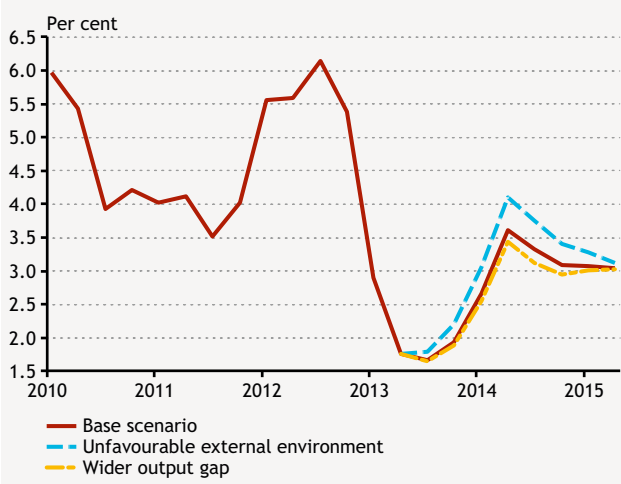
## 2 Effects of alternative scenarios on our forecast

According to the Monetary Council, the uncertainty surrounding the measurement of the current cyclical position of the economy and the fragile global financial environment are the most relevant risks going forward, in terms of conducting monetary policy. In addition, developments in investment, which is crucial to the long-term growth potential of the economy, may also be surrounded by two-sided risks.

If the decline in production capacities of the economy during the crisis is smaller, the path of potential output may be higher and the current cyclical position of the economy may be more open. In case of a more open cyclical position, the pass-through of cost shocks to prices is more constrained, and the inflationary effects of cost shocks hitting companies are smaller. More subdued inflation and a weak cyclical position may justify significant monetary loosening.

The room for manoeuvre of monetary policy may also be affected by persistent changes in perceptions of the risks associated with the economy. In the event of a significant deterioration in global risk appetite and a protracted recession in the euro area, Hungary's most important trading partner, risk premia on domestic financial assets may increase significantly, possibly justifying monetary tightening.

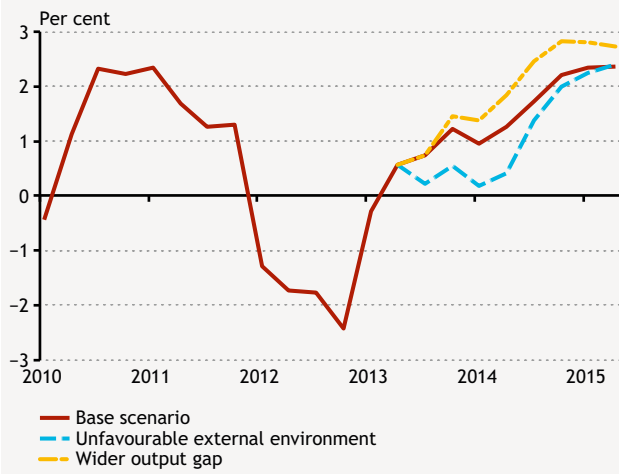
**Chart 2-1**  
The impact of the risk scenarios on our inflation forecast  
(2010 Q1–2015 Q2)



In the Monetary Council's judgement, the most relevant risks in terms of developments in monetary conditions are the amount of excess capacities in the economy, the expected investment activity and the global financial environment.

Incoming macroeconomic data confirm that weak domestic demand has a strong disciplinary effect on economic agents' pricing and wage decisions. While the long-term supply side of the economy is determined by the production capacities existing in the economy, the disinflationary effect of domestic demand depends on excess capacities, i.e. on the cyclical position. The estimate for the real-time output gap may be surrounded by substantial uncertainty, stemming from the fact that the cyclical position of the economy (the differential between current and potential output) is not a variable that can be observed directly. If the decline in production capacities of the economy is smaller than assumed in the baseline scenario, the path of potential output might be higher and the current cyclical position of the economy might be more open. In the case of a more open cyclical position, the pass-through of cost shocks to prices is more constrained and the inflationary effects of cost shocks affecting companies are smaller, which may justify significant monetary loosening. With looser monetary conditions and higher potential growth, the economy may grow faster than in the baseline scenario.

**Chart 2-2**  
**Impact of the risk scenarios on our GDP forecast**  
 (2010 Q1–2015 Q2)



The conflict between optimistic global investor sentiment and the high willingness to take risks driven mainly by monetary easing of advanced countries' central banks and the weak real economic performance has not eased in recent months. Consequently, the global financial environment may be characterized by higher volatility and fragility. Another risk may be a protracted recession in the euro area, despite the significant efforts made by the European institutions. All in all, in the event of a considerable deterioration in global risk appetite, risk premia on domestic financial assets may increase significantly, possibly justifying monetary tightening. Due to the decline in export sales, tightening in domestic credit conditions and the increase in foreign currency debt because of the depreciating domestic currency, growth in this scenario is lower than the one outlined in the baseline scenario (Chart 2-1 and 2-2).

In the Monetary Council's judgement, investment activity and thus long-term economic growth potential are surrounded by two-sided risks.

The interest rate cuts implemented in the recent period and the Funding for Growth Scheme (FGS) may have a more favourable impact on lending and stimulate investment to a greater extent than assumed in the baseline scenario. This optimistic scenario may entail higher investment and more favourable growth. In the event of more relaxed credit conditions and higher investment, GDP growth will exceed the assumption presented in the baseline scenario. At the same time, due to the higher growth trend, the cyclical position will remain practically unchanged, and thus the inflationary effect will be low and will not result in an interest rate policy different from the baseline scenario.

As opposed to the above, one negative risk may be that the decline in production capacities during the crisis was greater than assumed and that a smaller portion of the low growth is attributable to unused capacities. This may mean that the downturn in investment observed during the crisis is a more lasting process than assumed in the baseline scenario. Accordingly, the medium-term output potential of the economy may also be lower. Compared to the baseline scenario, the expansion in both investment and GDP will be more moderate in the coming years, and the narrowing of the output gap starting from a more closed position is also faster. A more closed cyclical position results in a lower disinflationary effect. As a result of this, inflation may remain in line with the 3 per cent target if interest rate conditions are slightly tighter than in the baseline scenario.

# 3 Macroeconomic overview

## 3.1 International environment

Following the slowdown at the end of last year, global economic activity strengthened in 2013 Q1. However, significant regional differences could be observed behind the improving economic indicators. In terms of the developed regions, the US and Japan showed moderate growth, while the recession that started in the second half of 2011 continued in the economy of the euro area at the beginning of the year. Growth in the developing region continues to be dynamic. The currently observed differences in growth dynamics may remain in the coming quarters as well. Accordingly, in the process of global recovery, the risk of the development of a multi-speed growth environment has increased. Demand-side inflationary effects are low in the developed economies, while commodity price adjustments pointed to a decline in inflation rates in general. In line with the fragile real economy and low inflation environment, central banks of major economies maintained or further eased their loose monetary conditions.

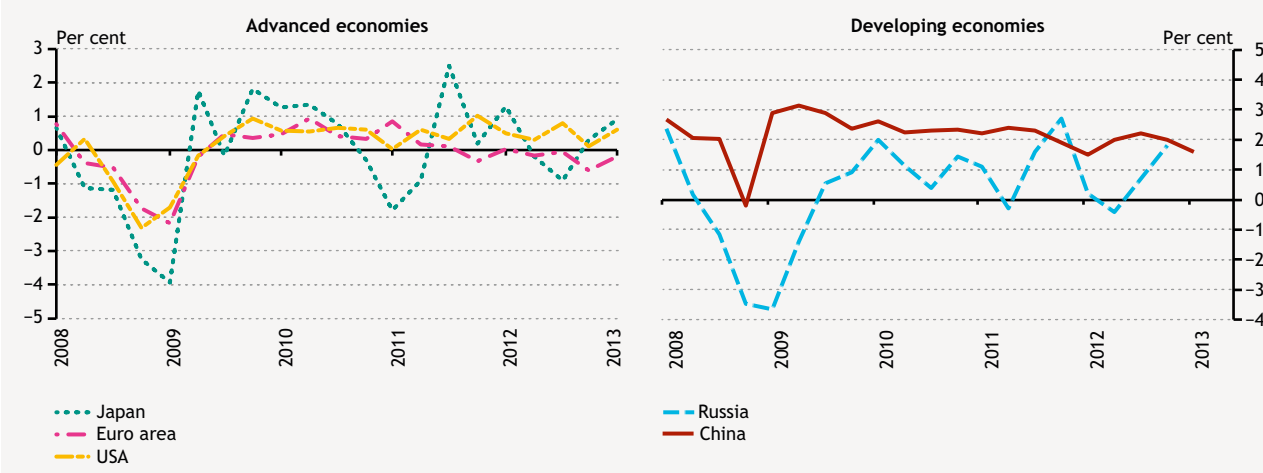
The earlier improvement in capital market sentiment was followed by uncertainty, whilst developments in real economic indicators remained subdued. In addition to the developments in the European debt crisis, international financial market sentiment is primarily influenced by expectations related to the liquidity-providing measures of developed country central banks. In terms of Hungary's risk assessment, global financial market sentiment was supportive in the past quarter as well.

### 3.1.1 DEVELOPMENTS IN GLOBAL ECONOMIC ACTIVITY

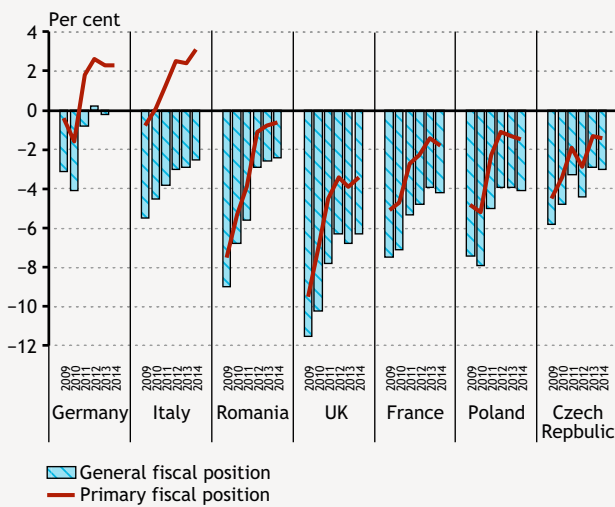
Following a subdued fourth quarter, growth in the global economy continued at a higher pace again in 2013 Q1 (Chart 3-1). However, there were significant regional differences behind the improving GDP indicators. Growth in developing

**Chart 3-1**  
**GDP growth in major economies**

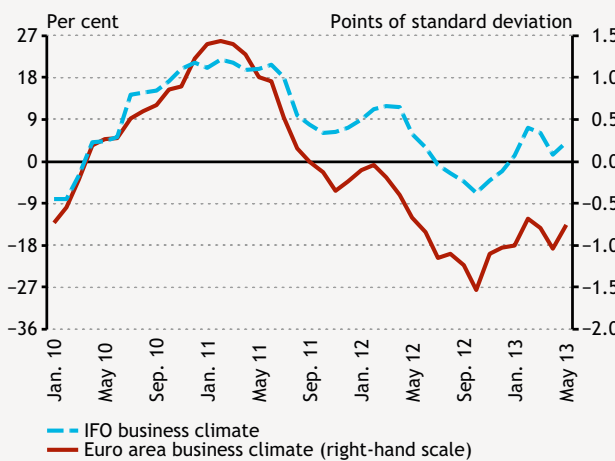
(quarterly changes in seasonally adjusted data; 2008 Q1–2013 Q2)



**Chart 3-2**  
Fiscal and primary balances  
(European Commission, 2009–2014)



**Chart 3-3**  
Business climate indices for the euro area and Germany  
(EABCI, IFO, January 2010–May 2013)



countries continued to be dynamic, while more remarkable differences in growth evolved in the developed region. In addition to economic activity in the US, the growth rate in Japan also accelerated as a result of co-ordinated fiscal and monetary policy measures. At the same time, last year’s recession continued in the euro area. Based on forecasts by major institutions, in the case of the main economic regions the probability of a three-speed recovery instead of a two-speed one expected earlier has increased considerably.

US economic growth continued at a subdued pace. On an annual basis, GDP grew by 1.8 per cent in Q1. The Fed continues to support growth using unconventional means, but the uncertainty surrounding fiscal consolidation hinders the efficiency of such measures. As a result of the budget act adopted earlier, significant expenditure cuts entered into force at the beginning of March, which, for the time being, have not had any material impact on US economic growth. Forward-looking indicators point to further strengthening in activity in 2013.

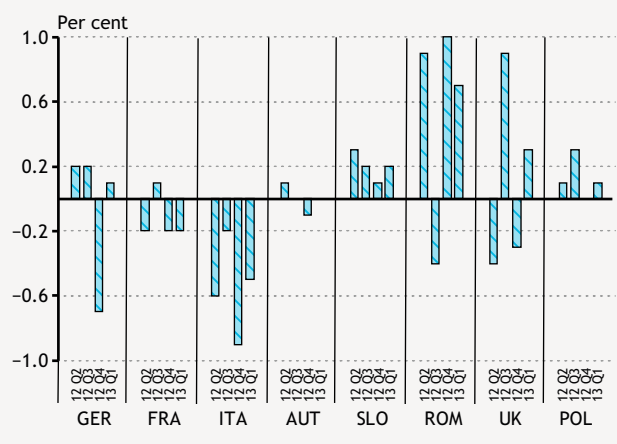
On an annual basis, euro area economic output declined by 1 per cent in Q1. The reduction in debts accumulated prior to the crisis, the protracted fiscal adjustment programmes, banks’ weak lending activity, high unemployment and the generally strengthening precautionary considerations pointed to a decline in demand in general. One favourable development may be that as a result of previous years’ fiscal adjustments, the fiscal balance in the majority of countries struggling with equilibrium problems improved considerably, and thus demand-reducing fiscal policy may be phased out in the near term already (Chart 3-2). Consequently, following this year’s recession, slow, gradual growth may start in 2014 (Chart 3-3).

Growth in the emerging region continues to be dynamic, although growth rates varied across countries. The Chinese economy grew by 7.7 per cent in Q1, primarily as a result of continued support from major investment projects in infrastructure and an upswing in the real estate market. In other major emerging countries, growth rates showed a mixed picture, with only India registering a pick-up in activity.

### 3.1.2 ECONOMIC OUTLOOK OF OUR MAIN TRADING PARTNERS

Growth in our euro zone trading partners developed unfavourably in Q1. On an annual basis, the German economy contracted by 0.3 per cent, and it moderately grew on a quarterly basis. The French economy sank into recession, while the Italian economy remained in recession. The Austrian economy stagnated both on an annual and on

**Chart 3-4**  
**Quarterly economic growth of our main export partners**  
 (2012 Q2–2013 Q1)

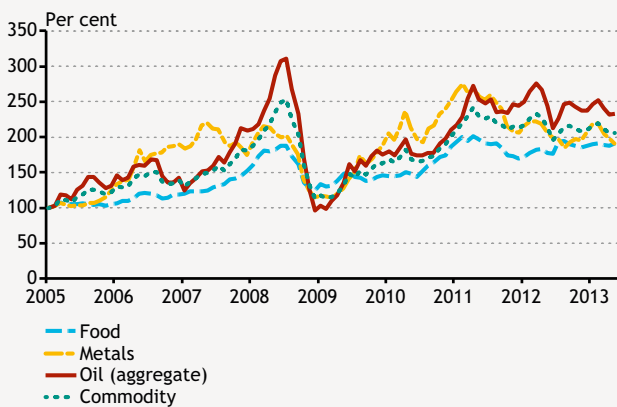


a quarterly basis. The Slovakian economy expanded at a moderate pace.

The recession in the euro area limits the growth opportunities of the Central and Eastern European region through the reduction of export opportunities. Weak external demand particularly hits the Czech Republic, where the recession deepened in the beginning of 2013. The pace of economic growth decelerated significantly in the larger, less open Polish economy. By contrast, acceleration in growth was observed in Romania, in which the correction in agriculture performance might have played a role, as was the case in Hungary (Chart 3-4).

Forward-looking European business cycle indicators continue to signal a fragile growth environment. The euro area business climate index moved downwards, while the German Ifo index, which is also important in terms of the growth prospects of the region, indicated some improvement.

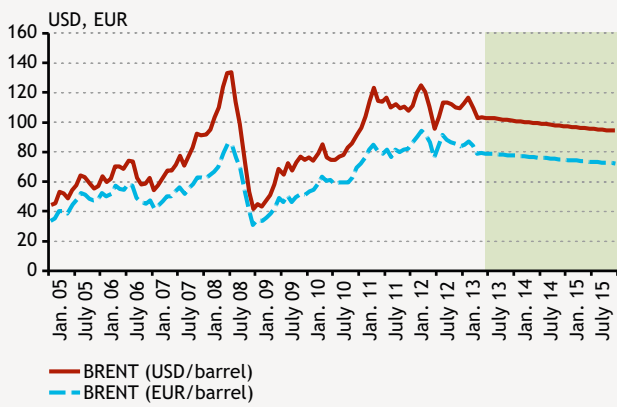
**Chart 3-5**  
**Changes in major commodity prices**  
 (USD; January 2005–May 2013)



### 3.1.3 GLOBAL TRENDS IN INFLATION

Following an increase last year, global commodity prices corrected lower this year. Inflation expectations, which were consistently low against the background of the fragile outlook for demand and in spite of central banks' liquidity increasing measures, also led to falling prices (Chart 3-5). From a level exceeding USD 110 in the previous quarter, the price of the Brent oil fell to around USD 100. Futures prices point to a further drop in the price (Chart 3-6). Prices of industrial commodities (iron ore, coal) and unprocessed food have also declined since February. Futures prices of wheat and corn have been falling since February.

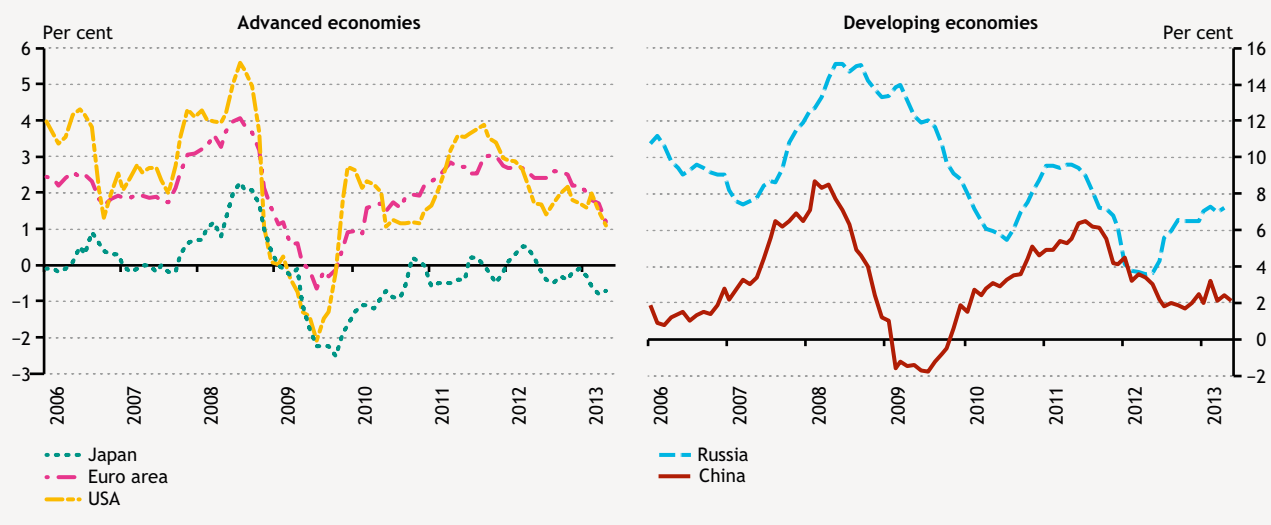
**Chart 3-6**  
**Brent spot and futures prices in various currencies**  
 (January 2005–December 2015)



In most countries, declining commodity prices and subdued economic activity resulted in lower inflation rates. In the developed countries, inflation has typically been below the target in recent months. The fading effect of indirect taxes also played an important role in the decline in euro area inflation. According to major central banks' evaluations, medium-term inflation risks are moderate, in line with the subdued economic activity, and so they maintained or moved ahead with further easing of their monetary conditions. At its meeting in May, the ECB reduced the policy rate by 25 basis points. In Q2, several major central banks (Fed, ECB) perceived a risk of undershooting the inflation target (band).

In general, annual inflation declined in the CEE region as well. Inflation eased close to or below the target in each country, except in Romania. Higher inflation may only be temporary in Romania as well, and in the second half of the year it may reach the target band following the fading of

**Chart 3-7**  
**Inflation in major economies**  
*(in per cent; year-on-year; January 2006–May 2013)*



the one-off price level increases. The adjusted indices relevant for monetary policy do not indicate any inflationary pressure (Chart 3-7).

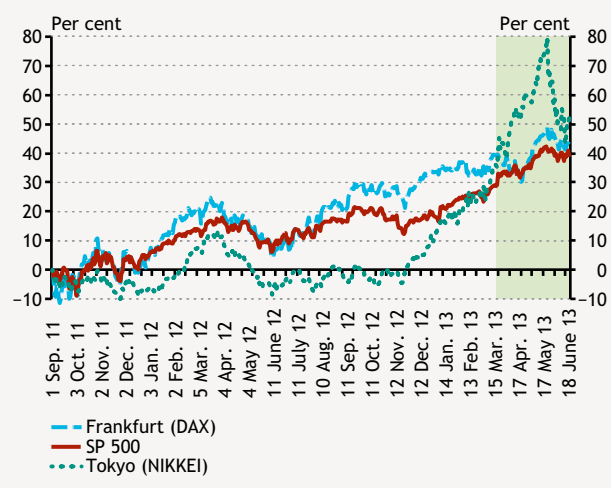
The Czech central bank left its base rate close to zero. In line with underlying inflation trends, the Polish central bank and the MNB reduced their respective base rates by 75 basis points in the past quarter.

### 3.1.4 MONETARY POLICY AND FINANCIAL MARKET DEVELOPMENTS

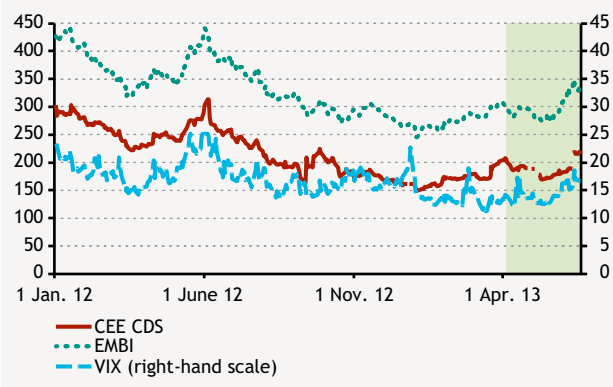
In the first part of the past quarter, financial market sentiment continued to be supportive, and the high global willingness to take risks experienced in the previous quarter also remained. This was attributable to earlier announcements related to the management of the debt crisis, the continuation of the quantitative easing in the US and the announcement of aggressive easing by the Bank of Japan. As a result of these further announcements, the equity market indices related to the major developed countries reached historic highs, although a correction was observed on several stock exchange at the end of the period (Chart 3-8). The positive developments were only temporarily disturbed by the crisis in Cyprus, the uncertainties in domestic politics in Italy and some less favourable macro data.

Investors' attention was directed to the future of quantitative easing programmes. The effect on the market of different statements by decision-makers in connection with the winding down of the US QE3 fluctuated, whereas

**Chart 3-8**  
**Developments in major stock market indices**  
*(September 2011–June 2013)*



**Chart 3-9**  
**Developments in major stock market indices**  
*(January 2012–June 2013)*



the recently launched asset purchase in Japan had a clearly favourable influence on markets. In the favourable atmosphere interspersed with minor adjustments, safe haven currencies weakened, and the Swiss franc departed significantly from the threshold of 1.20 against the euro. The depreciation of the Japanese yen was mainly a result of the asset purchase programme of the Bank of Japan. The Fed’s announcement about the tapering of the asset purchase programme resulted in higher volatility and a correction at the end of the period (Chart 3-9).

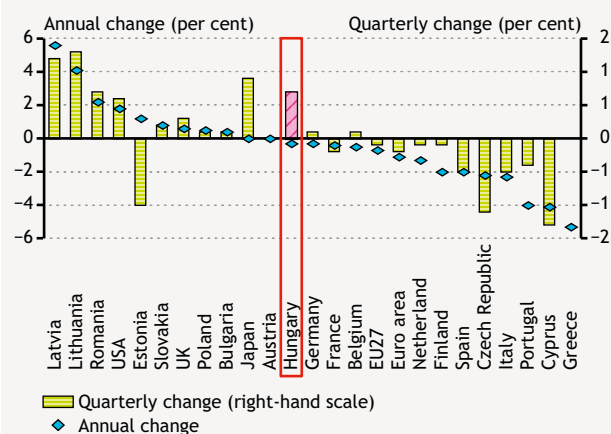
Following a temporary decline, government securities market yields of developed countries rebounded to the end-March level, while a considerable decline in yields was observed in emerging countries until the adjustment at the end of the quarter. Due to the simultaneous announcements by the Bank of Japan and the use of the fiscal stimulus, volatility in the bond market increased. As a result of the excess liquidity and the positive news, the risk assessment of the CEE region improved compared to the previous quarter, and, in line with this, government securities market yields also continued to decline. In mid June, however, the supportive financial market sentiment for the CEE region deteriorated significantly, with risk spreads and yields consequently rising above the levels from the previous quarter.



## 3.2 Aggregate demand

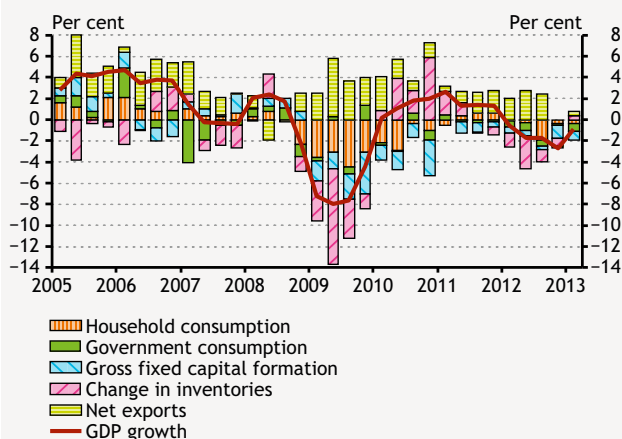
Following last year's recession, Hungary's GDP increased again in the first quarter of this year. The growth early in the year was strong even in international comparison and was mainly attributable to the adjustment at the beginning of the year of the significant one-off effects relating to the previous year, while only a moderate shift was observed in the general demand conditions. Export sales are limited by the subdued economic performance of Hungary's main export markets. In the case of domestic demand conditions, the increase in household real income resulted in stronger demand conditions, but the persistently tight credit conditions, continued balance sheet adjustment by the private sector and still strong precautionary considerations restrained the recovery in domestic demand. Moderate domestic demand continues to exert strong downward pressure on prices.

**Chart 3-10**  
Growth in European and major economies in Q1  
(2013 Q1)



In 2013 Q1, the Hungarian economy emerged from the recession that had lasted for a year. The 0.7 per cent growth registered at the beginning of the year compared to the previous quarter was strong in international comparison as well, and was mainly a result of the correction of one-off effects from the previous year (weak agricultural harvest results and declining exports and inventory accumulation, due to year-end plant shutdowns, Chart 3-10 and 3-11). At the same time, only a moderate shift was observed in general demand conditions. External demand was limited by the weak performance of Hungary's export markets, while domestic demand was restrained by the continued reduction in private and government debts accumulated prior to the crisis, the continued tight credit conditions and generally strong precautionary considerations. However the increase in household real income perceived since the beginning of the year and the gradually improving utilisation of EU funds in recent quarters had a positive influence on the demand environment.

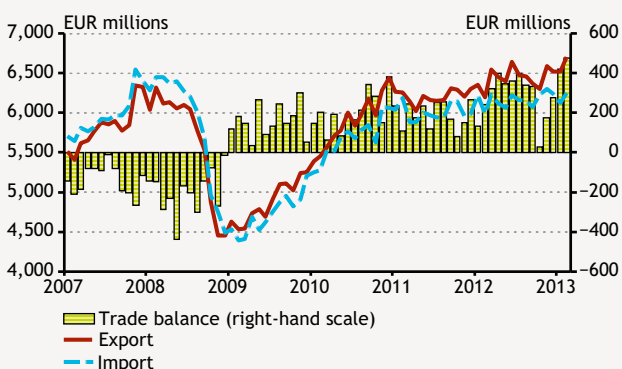
**Chart 3-11**  
GDP growth and its absorption side decomposition  
(2005 Q1–2013 Q1)



### 3.2.1 FOREIGN TRADE

The economic performance of Hungary's most important trading partners remained subdued in early 2013. The euro area remained in recession in the first quarter of this year as well, and signs of slowing economic activity became visible in Central and Eastern European countries as well, where growth had been more rapid earlier. In particular, high unemployment rates and tight credit conditions reduced demand for consumer durables and investment goods, which are of key importance for Hungarian exports. International business cycle indicators suggest that the change in trends expected in Hungary's external markets may be further delayed.

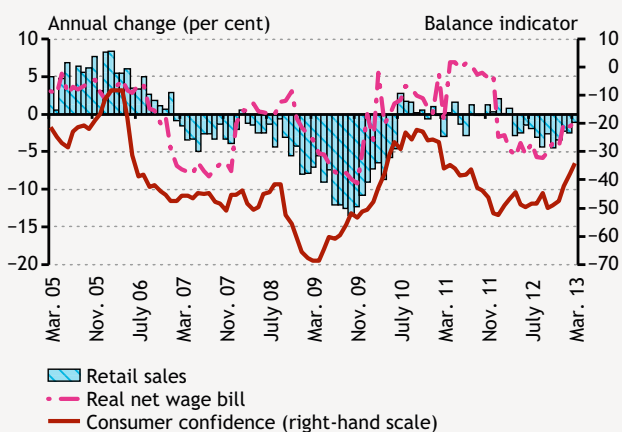
**Chart 3-12**  
Value and balance of foreign trade in goods  
(January 2007–April 2013)



Despite the weak external environment, Hungary’s trade balance improved considerably at the beginning of the year (Chart 3-12). This improvement may have primarily resulted from the correction of one-off factors which affected 2012 Q4. The plant shutdowns at the end of last year resulted in a decline in exports, while both the private and public sectors scheduled several major import procurements for the end of last year. In the private sector, the large-scale investment projects in the automobile industry may have involved significant machinery imports. In addition, the imports of the trains of metro line 4 were scheduled on the turn of 2012–2013. The fading of these one-off factors resulted in a considerable improvement in the foreign trade balance in the first months of the year.

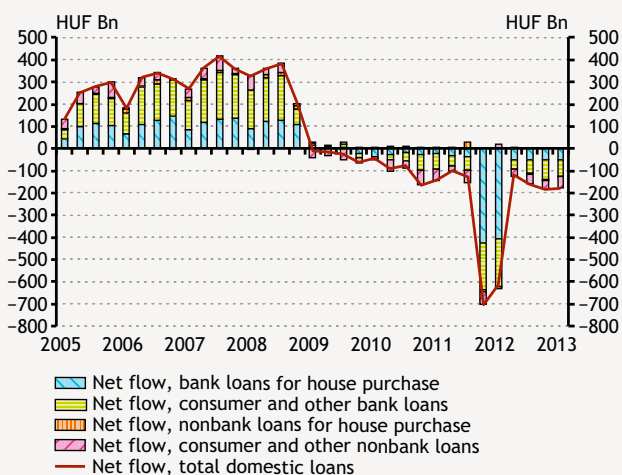
### 3.2.2 HOUSEHOLD CONSUMPTION

**Chart 3-13**  
Developments in retail sales, income and the consumer confidence index  
(January 2005–March 2013)



Last year’s rate of decline in consumption expenditures moderated, but household consumption demand remained subdued in Q1 as well. In line with the steep fall in inflation figures at the beginning of the year, consumer confidence indicators signalled improvement in the financial position of households. An increase in the real value of disposable incomes was primarily observed among lower-income households characterised by a higher consumption rate (mainly pensioners and those employed around the minimum wage). However, in view of households’ continued debt reduction and strong precautionary considerations, the additional income may have mainly appeared in debt repayments and financial savings. Preliminary retail data for April point to stabilization in consumption demand. Stronger sales were borne primarily by fuel and food, which are more sensitive to variations in current incomes (Chart 3-13).

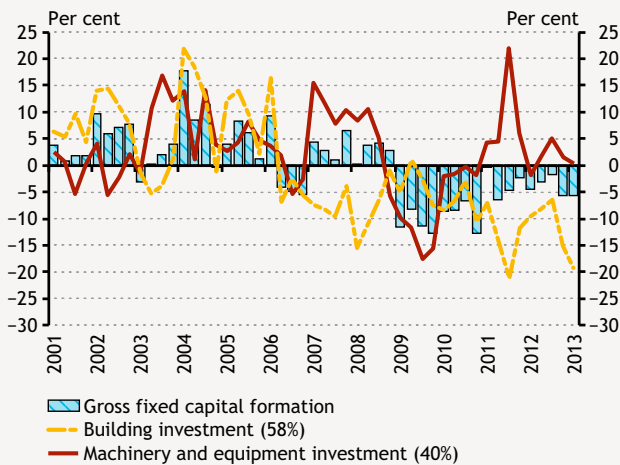
**Chart 3-14**  
Quarterly net increase in loans to households from domestic financial intermediaries by credit purpose  
(2005 Q1–2013 Q1)



Household lending remained weak. Outstanding loans of domestic financial intermediaries decreased further both in housing and consumption loans segment (Chart 3-14). Despite the interest subsidy schemes, the volumes of new lending show no signs of recovering from the historically low levels of last quarter. Lending to households is still determined by demand conditions, i.e. the gradual adjustment of the pre-crisis indebtedness and precautionary motives due to the uncertain growth expectations are still a key part of household behaviour.

Utilisation of the exchange rate cap scheme continues to fall short of expectations, and thus the weaker exchange rate early in the year may also have limited the funds that can be spent on consumption. The decline in consumption demand was primarily reflected in the consumption of durables, which are more sensitive to longer-term income expectations and credit conditions.

**Chart 3-15**  
**Developments in investment**  
 (annual change, 2001 Q1–2013 Q1)



### 3.2.3 PRIVATE INVESTMENT

Investment demand of both households and companies remained subdued in the first quarter of 2013 (Chart 3-15). Weak profitability, the tight credit environment and the high ratio of unutilised capacities continue to reduce companies' propensity to invest. Significant new investment projects were mainly realised within the framework of already launched developments in the automotive industry.

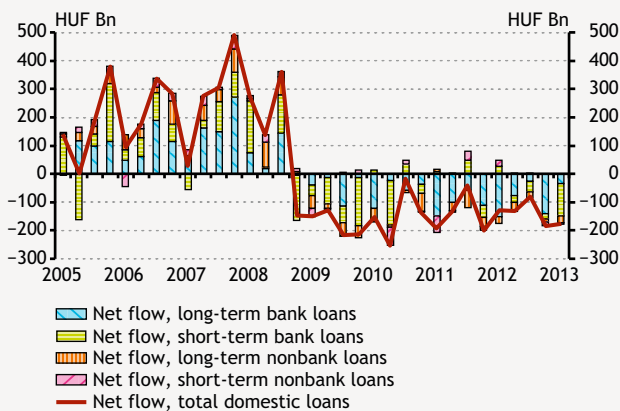
During the first quarter, the lending of financial intermediaries contracted with a similar extent, than in the previous period. Although both short and long-term loans outstanding decreased, the major part of the decrease stemmed from short-term (forint) loans.

The main factors influencing lending remain unchanged (Chart 3-16). The tight credit conditions which developed earlier are still acting as a supply-side barrier.<sup>4</sup> These supply side barriers mostly impact companies from the SME segment, as these rely more on bank lending in their operations. The Lending for Growth Scheme launched by the MNB to ease these constraints may significantly improve the financing possibilities of SMEs.

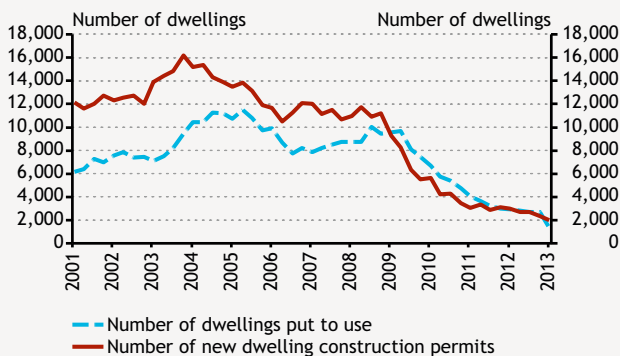
In early 2013, firms' demand for credit probably remained moderate. The low level of investment activity is curbing demand for long-term loans, whilst the significant drop in short-term loans is more the consequence of one-off factors.

The uncertain outlook for economic activity and tight credit conditions hinder both corporate and household investment. The postponement of investments is a significant motive in households' balance sheet adjustment. The number of dwelling completions in Q1 was historically low. The cold weather at the beginning of this year may have also hindered the completion of construction as a temporary factor (Chart 3-17).

**Chart 3-16**  
**Quarterly net increase in loans to non-financial corporations from domestic financial intermediaries**  
 (2005 Q1–2013 Q1)



**Chart 3-17**  
**Construction of new housing and the number of building permits issued quarterly**  
 (2001 Q1–2013 Q1)

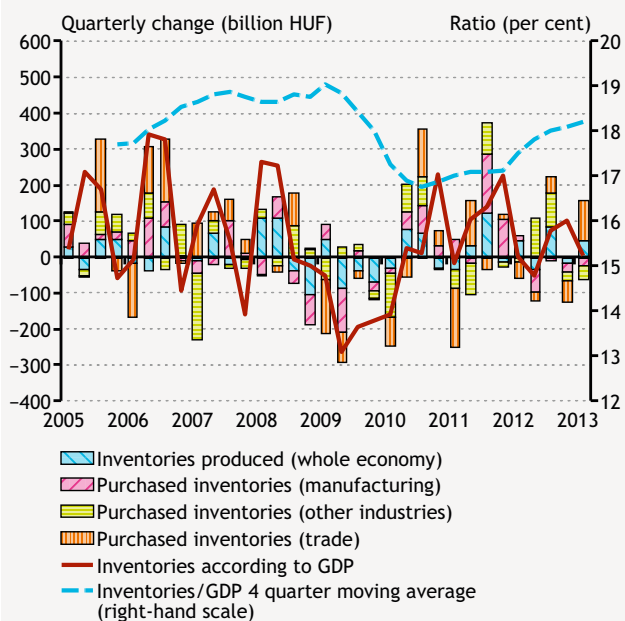


### 3.2.4 CHANGES IN INVENTORIES

As a result of industrial plant shutdowns at the end of last year and the weak agricultural harvest results, a reduction in inventories was observed. This effect was partly corrected in the first quarter of this year, resulting in a positive contribution to growth early in the year (Chart 3-18). Improvement in industrial production and crop yields are expected to be better than last year and this would result in newly increasing inventories. At the same time, the uncertain outlook for demand and tight corporate credit

<sup>4</sup> Based on the *Trends in Lending* 2013 May publication.

**Chart 3-18**  
**Changes in inventory based on current prices and GDP;**  
**the inventory nominal GDP ratio**  
 (2005 Q1–2013 Q1)

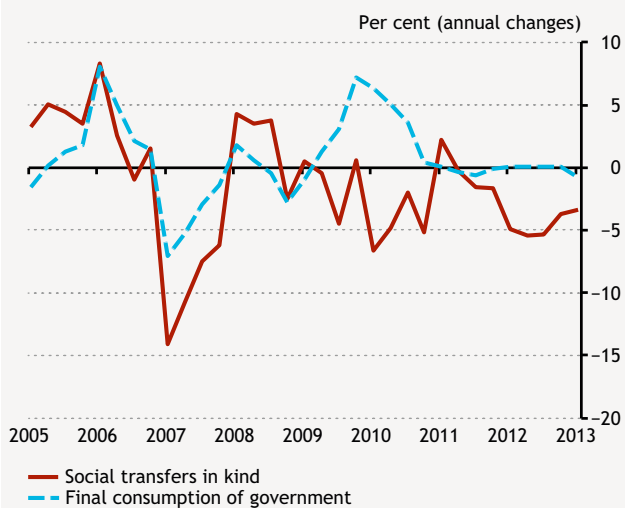


conditions continue to justify tight inventory management. The expected easing in credit conditions (as a result of the Funding for Growth Scheme) may result in an increase in inventory accumulation among small and medium-sized enterprises over the short run.

### 3.2.5 GOVERNMENT DEMAND

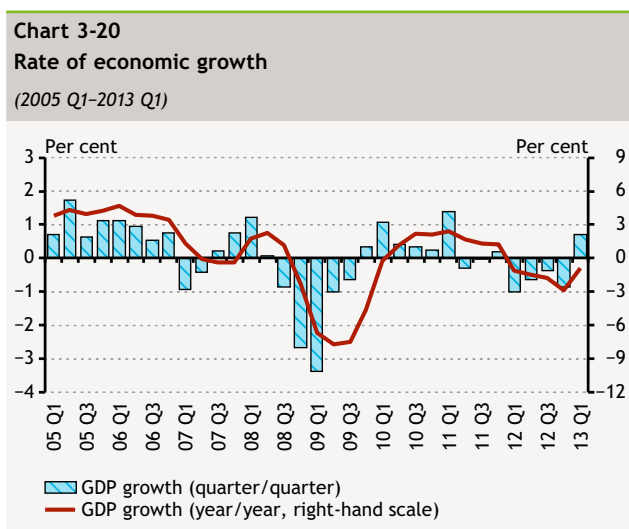
Consumption expenditures of the public sector continued to be determined by fiscal balance-improving measures. In line with fiscal saving, the weight of investment implemented from the state's own funds has declined further. This was offset by an increasing utilisation of EU funds, which was mainly reflected in the increase in public investment in infrastructure (Chart 3-19).

**Chart 3-19**  
**Changes in government consumption**  
 (2005 Q1–2013 Q1)



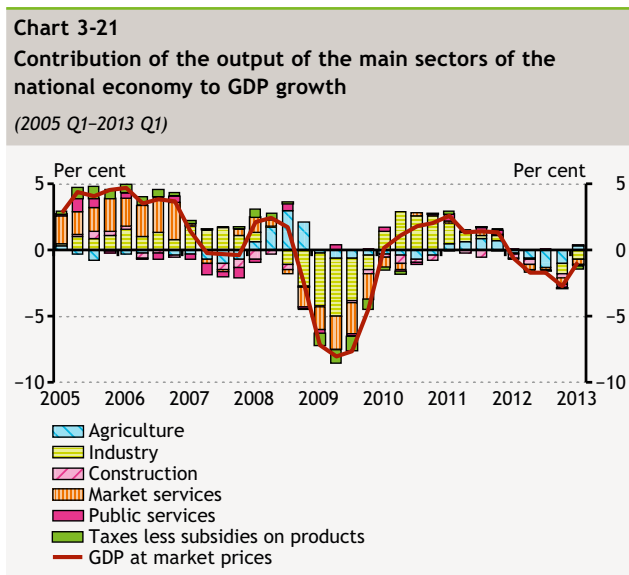
## 3.3 Production and potential output

Compared to the previous quarter, domestic economic output increased by 0.7 per cent in 2013 Q1, but declined by 0.3 per cent in an annual comparison. The correction of the unfavourable one-off factors at the end of last year played a significant role in the strong increase measured on a quarterly basis. At the same time, there has so far only been a minor shift in the underlying developments that determine growth: prospects for global economic activity are weak, while the expansion of domestic demand is limited by precautionary considerations. We have not seen any shift in the factors that determine potential economic growth: investment activity continues to be subdued, while the ratio of longer-term unemployed was close to the level reached during the crisis.



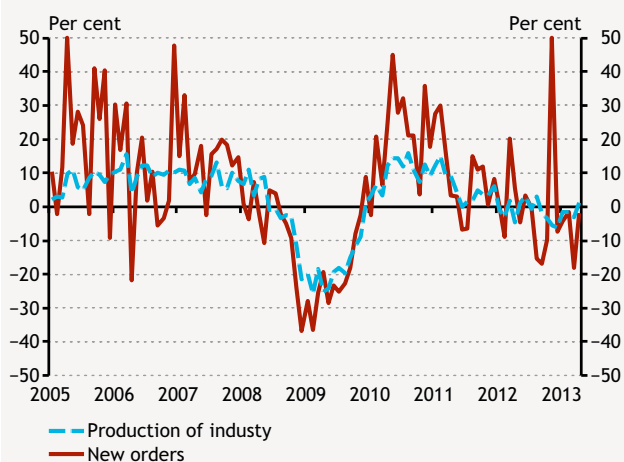
Following last year's recession, economic output increased by 0.7 per cent in 2013 Q1 compared to the previous quarter (Chart 3-20). The correction of the unfavourable one-off effects experienced at the end of last year was observed in both industry and agriculture. As the same time, we have only observed a minor shift in underlying growth developments (Chart 3-21).

*Industrial production* increased by 5.7 per cent in Q1, thus correcting the temporary components of the decline that took place at the end of last year. As a result of the correction of factory shutdowns at the end of last year, a sharp increase was observed in January 2013, whilst the expansion of industrial output was more moderate in the subsequent months. In the last months the new export orders was subdued in accordance with the fragile external demand (Chart 3-22). The significant decline in the electronics sector in the past period stopped in 2013 Q1. Due to the expansion of new production capacities, vehicle industry output improved considerably in the first quarter of this year. The performance of the sector may continue to increase in the coming months, primarily as a result of the new automotive capacities (Chart 3-23).

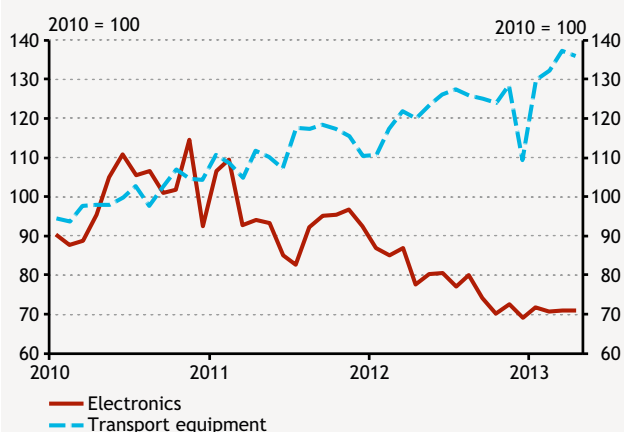


Following several years of decline, the performance of *construction* increased again in 2013 Q1. Compared to the same period last year, construction output increased by some 4 per cent in 2013 Q1. Construction output continues to be characterised by a strong dual trend: production mainly related to the private sector remains subdued, whereas expansion was observed in the case of other structures mainly financed from EU funds and related to public investment. The latter is in line with the expectations formulated on the basis of contract volumes, which had already been rising at the end of last year. In the coming months the effects of the government's infrastructural

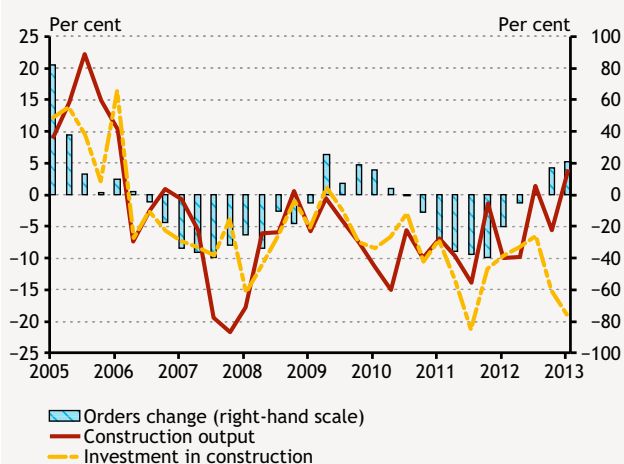
**Chart 3-22**  
Industrial production and new orders  
(January 2005–April 2013)



**Chart 3-23**  
Production of the main branches of the machine industry  
(January 2010–April 2013)



**Chart 3-24**  
Changes in construction output, contracts and building-type investment  
(2005 Q1–2013 Q1)



developments may be dominant in the sector’s performance. In 2013 Q1, construction contracts increased by 20.6 per cent on an annual basis, and therefore further improvement is expected in construction output in the coming quarters (Chart 3-24).

Correction of the unfavourable one-off effects experienced at the end of last year was observed in the case of *agriculture*. Accordingly, the performance of the agricultural sector increased significantly in Q1. It is important to note that in Q1 the correction following the historically weak performance of last year was primarily caused by the peculiarities of statistical accounting. It will be possible to assess the sector’s contribution to growth only when harvest results become available.

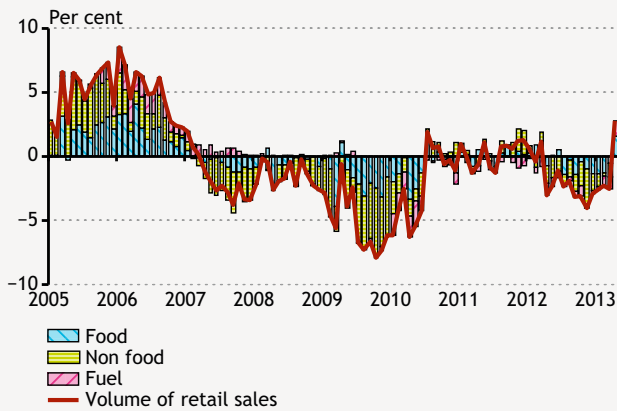
*Retail trade* was stagnant in a quarterly comparison, resulting in a 2.3 per cent decline on an annual basis in 2013 Q1, due to the base effect. Of the most important macroeconomic factors that determine household consumption, real earnings increased in Q1 again following last year’s decline, although in parallel with the continued balance sheet adjustment and tight credit conditions households continue to be characterised by cautious consumer behaviour. The greatest decline once again took place in the sales of consumer durables. Non-durable goods turnover in March was characterised by contrasting one-off effects. Regarding food sales, the whole Easter period occurred in March this year, and this may have generated a significant increase in turnover. With regard to fuel sales, however, the unfavourable weather in March may have reduced households’ travels, and there may have been a temporary decline in transport activity as well (Chart 3-25).

In the *catering* sector, the increase in turnover, which was typical of the whole last year, continued in 2013 Q1. This increase was observed in the case of both domestic and foreign guests. Nevertheless, the growth in turnover was greater in the case of foreign guests, which may have been attributable to the effects of the weaker exchange rate of the forint in recent quarters. As a one-off effect, the cancellations due to the unfavourable weather in March may also have been reflected in the more subdued developments in domestic reservations (Chart 3-26).

The performances of the *financial and real estate sectors* continued to be moderate. Household borrowing activity is still weak, and in 2013 Q1, households further reduced their consumer loans. The housing market continued to decline at the beginning of the year. On the demand side, weak developments in the housing market are attributable to households’ weak income position and the tight credit conditions. The number of building permits fell considerably

**Chart 3-25**  
Decomposition of retail sales

(January 2005–April 2013)

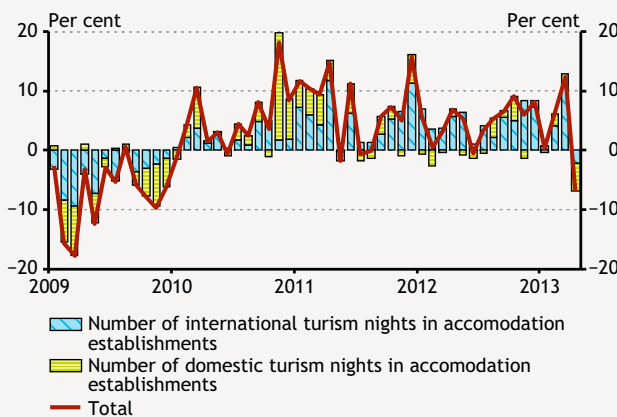


in Q1. As a result, the number of dwellings put into use may reach historically low levels in the coming quarters, reducing revenues from real estate trading and utilisation.

Our view of the *potential level of output* has remained practically unchanged compared to the situation described in the March issue of the *Quarterly Report on Inflation*. In 2013 Q1 as well, the unemployment rate remained at the high level that had evolved during the crisis. The ratio of permanently unemployed essentially did not change in the past quarter (Chart 3-27). This *Quarterly Report on Inflation* also contains a more detailed analysis of the cyclical and structural reasons for the increase in unemployment (see Sub-chapter 6.1). In view of the still high unemployment rate and the moderate investment activity, the slowdown in the potential growth rate of the economy may remain permanent.

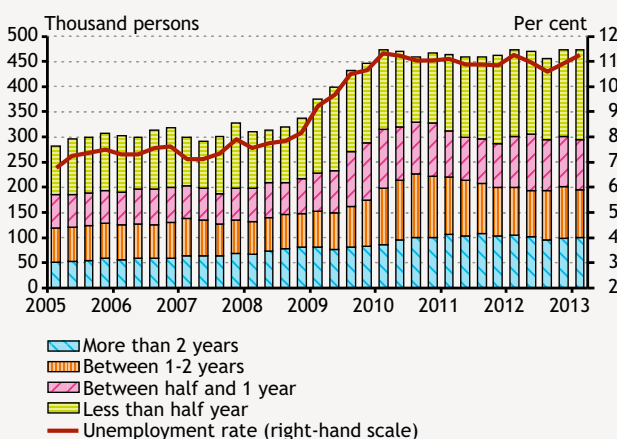
**Chart 3-26**  
Distribution of the number of tourism nights in accommodation establishments between domestic and foreign guests

(January 2009–April 2013)



**Chart 3-27**  
The unemployment rate and the job searching time

(2005 Q1–2013 Q1)



**Box 3-1**

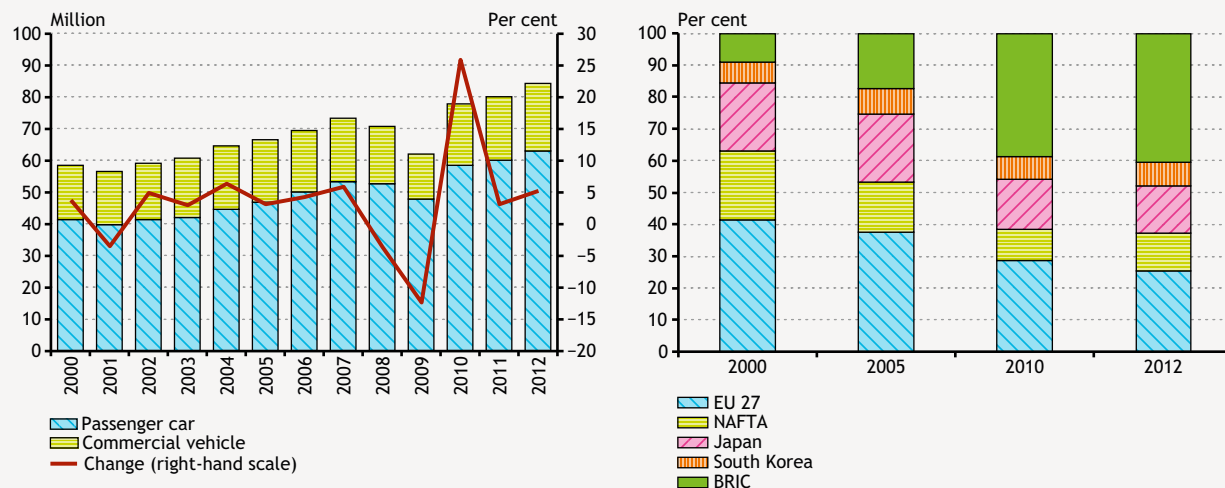
**Global automobile market trends and their domestic consequences**

As a result new investment projects in recent years, the role of the vehicle manufacturing sector, which was important in terms of Hungarian exports earlier as well, may strengthen further over our forecast horizon. In line with this, the exposure of the Hungarian economy to global automobile market trends may also increase. This box provides a brief overview of global and regional automobile market prospects and the situation of the manufacturers operating in Hungary.

**Global and regional market situation**

As regards developments in the supply of passenger cars and commercial vehicles, following the major temporary downturn characterising the crisis, production has followed a rising trend again in recent years (Chart 3-28). However, the trends observed in various regions in the world are different. Significant restructuring took place in the global automobile market in the 2000s: emphasis increasingly shifted in the direction of rapidly developing markets, where production costs are lower and domestic demand potential is higher.

**Chart 3-28**  
**Global passenger car and commercial vehicle production and changes in the distribution of passenger vehicle manufacturing in the world market**



Sources: ACEA, OICA.

Accordingly, the dynamics of automobile production showed significant differences across various regions in the past period. While production in the European Union fell by 8 per cent in 2012, a 17 per cent expansion was observed, for example, in the NAFTA countries. Production also increased considerably in the Asian region last year.

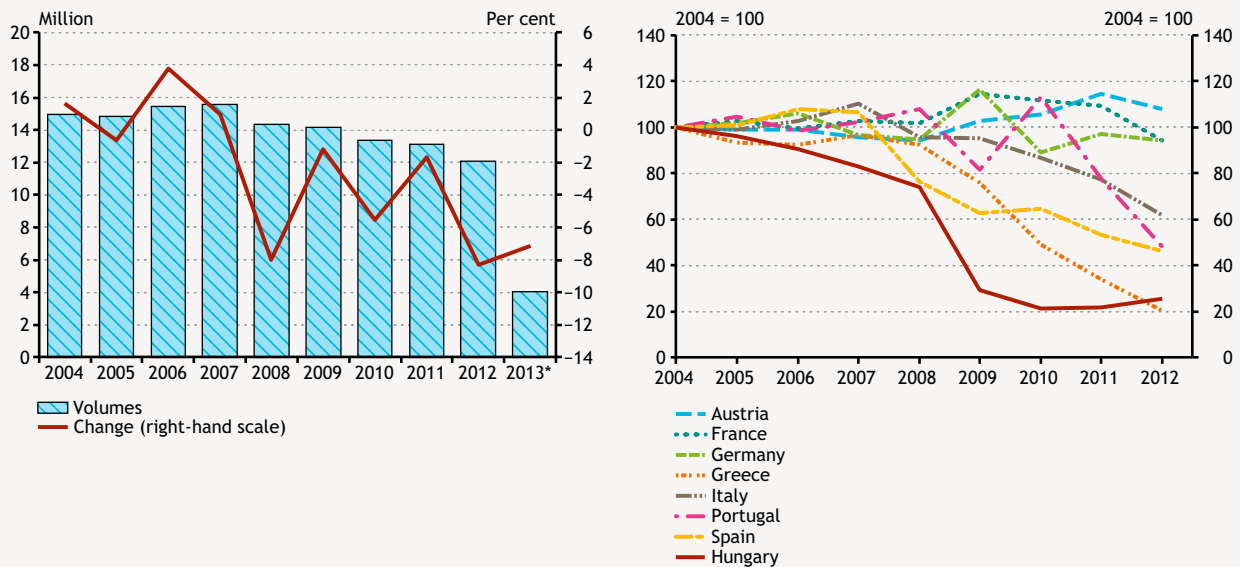
The structural changes observed on the supply side can be observed on the demand side as well: last year already Asia was the leader in new car sales, ahead of Europe and America as well. More than 42 per cent of all new car sales have been realized in China while the share of USA was 28 per cent and that of Europe was 21 per cent.

Following last year's slowdown, global economic activity may pick up again this year, but there are major differences in growth across the regions that are dominant in terms of automobile demand. Economic activity in the euro area may remain weak in the coming years, and consequently, demand for consumer durables may also remain subdued for a longer period of time. In the coming years, the growth rate in the United States may be higher than in Europe, while growth in Asia is expected to exceed 7 per cent this year and next year as a result of increasing external and still robust domestic demand.

In line with the different growth prospects of the various regions, forecasts for car market sales also show different trends. Most of the growth is expected to take place in the Asian region, where the number of sales may reach 30 million units by 2020, whereas sales



**Chart 3-29**  
Number of new passenger vehicle registrations in the EU



\* Based on monthly data until April in the case of 2013.  
Source: ACEA.

in the European market may hardly change. Major growth is expected in North America as well, where the number of vehicles sold may be close to pre-crisis levels by the end of the decade.

Expansion possibilities of European car manufacturers are greatly influenced by the regions where the majority of their exports are directed. Eighty-one per cent of Hungary’s vehicle exports are sold to the countries of the European Union, primarily to Germany, while Hungary’s direct exposure to the more rapidly developing regions is much lower. Looking at the demand side of the European market, a steady decline in the number of new passenger car registrations has been observed since the crisis (Chart 3-29). The largest fall in European sales following the crisis took place in 2012. In the case of new passenger car registrations, the dynamics of the decline vary significantly within Europe. The fall in demand was the greatest in the Southern countries struggling with high indebtedness. The decrease in sales in Hungary was also strong, similarly to that of the indebted economies.

It is important to note, however, that a portion of Hungary’s vehicle exports mostly to Germany is re-exported to developing regions. As a result, Hungary’s direct exposure to the European domestic demand may be lower.

**The situation of domestic manufacturers**

During the years of the crisis, the production of the car manufacturers present in Hungary declined significantly. Following the expansion typical of the subsequent two years, European sales by manufacturers operating in Hungary as well showed an unfavourable picture again in 2012. Moreover, information available for 2013 Q1 indicates the continuation of the unfavourable trend.

**Table 3-1**  
New passenger vehicle registrations in Europe of major automobile manufacturers present in Hungary

	2011 (thousand ea)	2012 (thousand ea)	Change (%)
Volkswagen Group	3,026	2,977	-1.6
GM Group	1,142	984	-13.8
Daimler AG	652	633	-3.0
Suzuki	167	144	-13.6

Source: ACEA.

In the weak demand environment, the uncertainty of medium-term prospects and the tight credit conditions affected demand for premium category cars and for the products of volume producers to different extents. Moderate global economic activity and subdued lending primarily reduced the demand for low and medium category cars, whereas sales in the premium segment seemed to be relatively more favourable (Chart 3-30).

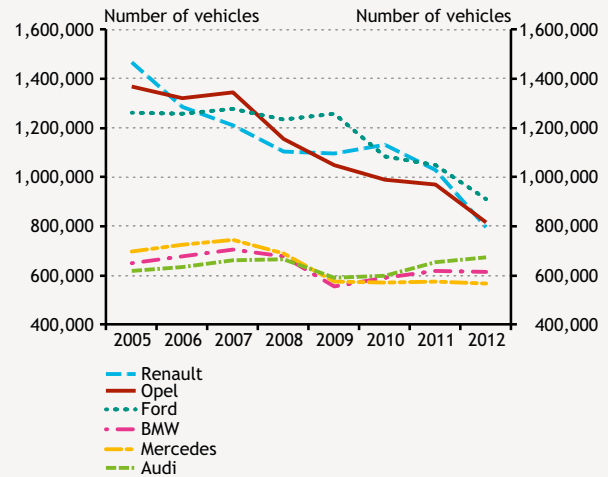
Looking at global car market trends, the following statements can be made with regard to the prospects of the domestic automobile industry:

- Hungarian vehicle exports continue to have a strong European orientation. Demand in the European car market may be characterised by persistently more subdued dynamics, which may primarily limit the sales possibilities of manufacturers that are mostly volume producers (Suzuki and GM).
- In recent years, Hungary’s exposure to the rapidly developing Asian economies has increased both directly and indirectly (mainly through exports to Germany). In the medium term, higher exposure to Asian markets, where the increase in demand is faster, may offset the negative effects of low growth in demand in the European market, especially as a result of the strong presence in Hungary of the German automobile firms with large shares in the Asian and American markets.
- With the new capacities developed in recent years, the share of the premium segment within domestic production may increase, lowering the sector’s strong exposure to global cycles.

In addition to the aforementioned longer-term effects, the effects stemming from the increase in production from new capacities may primarily dominate over the short run. Following last year’s output of 40,000 cars, 100,000-120,000 passenger cars are planned to be manufactured in the Mercedes factory in Kecskemét from this year.

Following the 150,000 cars last year, in 2013 Suzuki is planning to manufacture 180,000 passenger cars in Esztergom, still remaining below its maximum capacity. At the same time, it is an indication of favourable future prospects that the capacity of the Opel factory in Szentgotthárd was expanded last year.

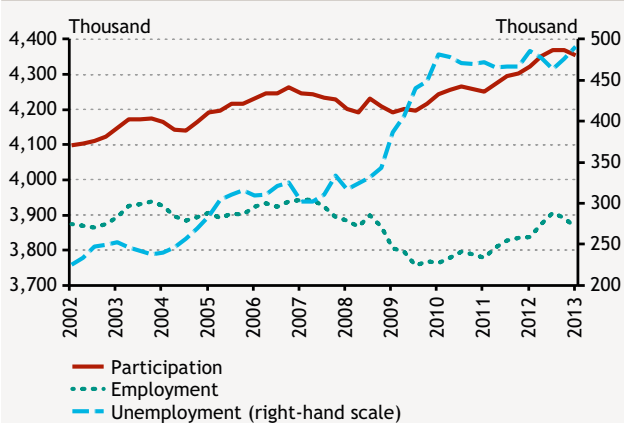
**Chart 3-30**  
New passenger car registrations in Europe in the low and medium category and in the premium segment



## 3.4 Employment and labour market

The increase in the activity rate came to a halt in 2013 Q1. The number of employed increased on an annual basis, which was also reflected in the decline in the unemployment rate. Increasing employment is mainly attributable to the relaunching of public work programmes at the beginning of the year and to the increase in their size, while labour demand in the private sector remained subdued in the past quarter as well. The labour market environment can still be considered loose, which may support the improvement of corporate profitability through wage costs instead of consumer price increases.

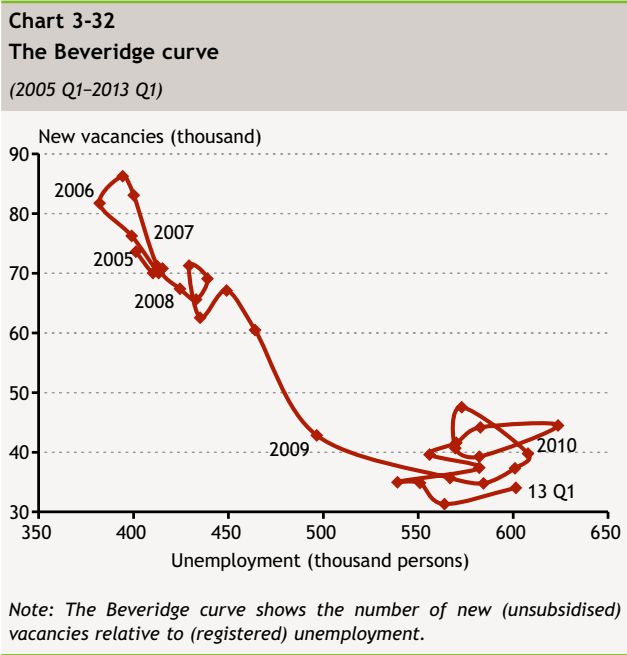
**Chart 3-31**  
Number of employed in the private sector calculated on the basis of institutional statistics and the labour force survey (2002 Q1–2013 Q1)



Labour supply, which had been growing since 2010 in line with the government measures aiming at increasing activity, came to a halt in the past quarter. The activity rate was around the level of 57 per cent (Chart 3-31). This shift may be temporary and may have been caused by the increased volatility related to the closure of the public work programmes at the end of last year and their relaunch early this year.

Compared to the same periods last year, the number of employed was 0.7 per cent and 2.2 per cent higher in 2013 Q1 and April, respectively. Examining the quarterly changes, demand of the private sector continues to be subdued. At the same time, the number of employed in the general government sector was determined by the expenditure-reducing measures of the government and the effects of the relaunched public work programmes.

In April 2013, the number of registered jobseekers was 552,000, i.e. 0.5 per cent less than one year earlier. The decline in the number of registered jobseekers is mainly attributable to the effects of the public work programmes, although developments in employment in the private sector were also somewhat more favourable than expected. The Labour Code changed in July 2012 and January 2013 reduced the hiring and dismissing costs of companies. Besides it also made the different employment forms more flexible. This allowed for a greater adjustment on the intensive margin and for this reason during the profit restoration firms can have more access to the labour hoarding strategy. The effects of this could have appeared in the better than expected private sector employment data of the beginning of the year.



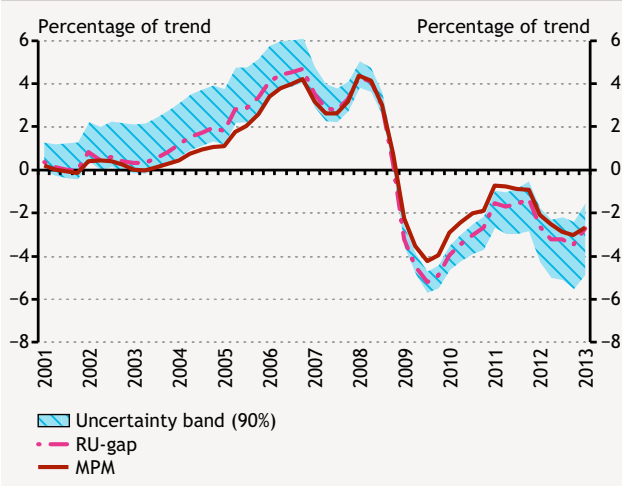
The number of permanently registered jobseekers stopped increasing. Subsidised vacancies continue to account for a large majority of the registered new vacancies, and the number of new unsubsidised vacancies has remained broadly unchanged in recent months.

In 2013 Q1, both the number of new vacancies and the number of registered unemployed increased compared to the previous quarter. No major shift in the Beveridge curve was observed; the labour market can still be considered loose (Chart 3-32).

## 3.5 Cyclical position of the economy

The Hungarian economy continues to be characterised by a significant amount of spare capacity; the output gap remains negative. Following last year's recession, the output gap may have already begun to close this year. The still low utilisation of production capacities continues to have a strong price and wage reducing impact on companies' operation.

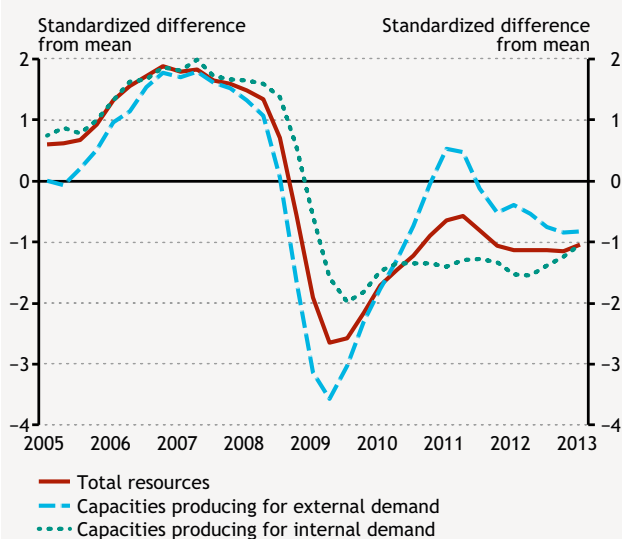
**Chart 3-33**  
Output gap indicators  
(2001 Q1–2013 Q1)



In 2013 Q1, Hungary recovered from recession, and thus the output gap may have closed again after the past one year (Chart 3-33). Nevertheless, the performance of the economy is still significantly below its potential level. This picture is corroborated by the resource utilisation (RU) gap, which captures the average capacity utilisation.

Based on the composite resource utilisation indicator used for the identification of the resource utilisation gap indicator, the utilisation of resources used in domestic production improved slightly in 2012 H2. By contrast, capacities producing for external demand showed moderating utilisation. Accordingly, although early last year the utilisation of resources producing for external and domestic markets reflected significant heterogeneity, at the beginning of this year they may all be considered equally underutilized (Chart 3-34).

**Chart 3-34**  
Resource utilisation indicators  
(2005 Q1–2013 Q1)

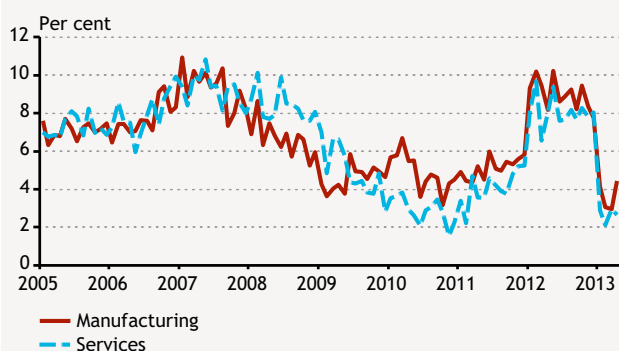


## 3.6 Costs and inflation

Overall, incoming data point to lower nominal developments. The decline in the inflation rate, which started at the beginning of the year, continued in the spring months. The annual indicator fell considerably, declining to below 2 per cent in April and May. Favourable cost shocks and a base effect were the main contributing factors to the decline in the consumer price index. In addition, the price-reducing effect of the demand environment also contributed to disinflation. This suggests that there is not much room for price hikes in the weak demand environment, so companies may manage to restore their profitability mainly via reductions in labour costs.

Wage developments during the year are mainly determined by the incoming effect in Q1. Available data indicate that, in line with the moderate inflation developments, the dynamics of the private sector wage index is subdued. The low pay rise at the beginning of the year reflects the wage-reducing effect of the loose labour market conditions. In addition, corporate profit restoration also continues to point to restrained pay rises.

**Chart 3-35**  
Changes in regular gross monthly average wages in the private sector  
(January 2005–April 2013)

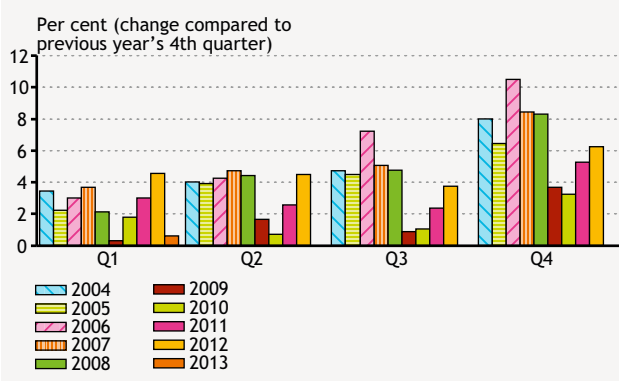


### 3.6.1 WAGES

Wage growth in the private sector was subdued in 2013 Q1, in line with the loose labour market environment (Chart 3-35). The dynamics of regular earnings reached a historical low in February. The decline in annual wage dynamics is greatly attributable to the base effect of the 2012 administrative wage increases. At the same time, unchanged wage moderation is observed on a monthly basis. The slowdown was stronger in market services than in manufacturing. In the case of market services, wage growth was moderate, in line with the low price increases experienced in the sector.

A large majority of companies carry out their pay raises for the year in March. Therefore, developments in wages during the year are mainly determined by the Q1 incoming effect. The data received in the first three months of the year show that wage dynamics in the private sector have declined considerably. In this period, the level of regular average earnings was stagnant. The low pay rise at the beginning of the year reflects the wage-reducing effect of the loose labour market conditions (Chart 3-36).

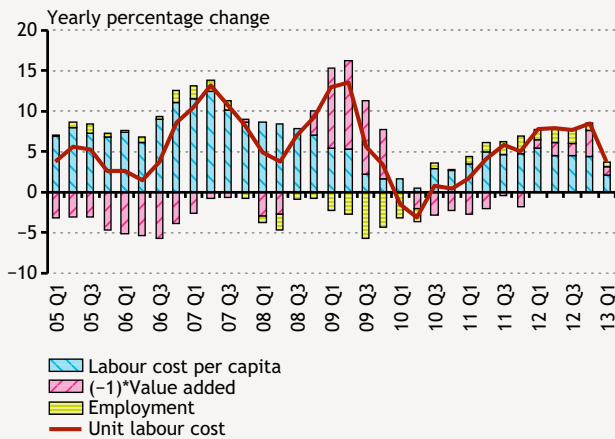
**Chart 3-36**  
Changes in regular gross monthly average wages in the private sector  
(2004 Q1–2013 Q1)



In terms of income categories, a major pay rise was observed only in the case of those with low income, which was in line with the size of the minimum wage increase. There was no significant pay rise in higher salary categories. Based on this, corporate behaviour changed compared to 2012, as in that year significant pay rises were carried out in the higher earning categories as well. Presumably, the underlying reason is that in 2012, as a measure related to

**Chart 3-37**  
Changes and components of unit labour cost in the private sector

(2005 Q1–2013 Q1)

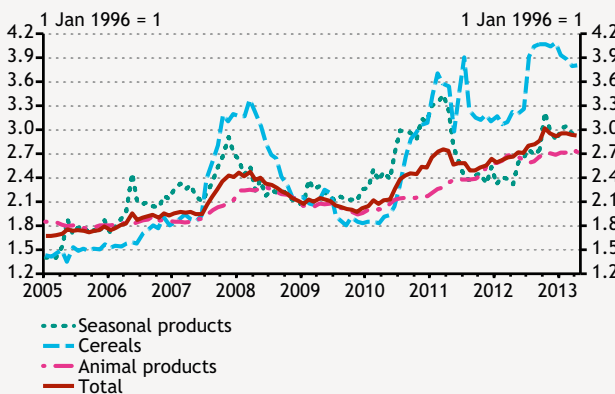


the phasing out of the super gross income tax scheme, there was an expected pay rise in the higher earning categories as well.

Starting from mid-2010, a gradual increase in unit labour cost has been observed, caused initially by an accelerating increase in wages. Later, worsening labour productivity also contributed to this trend. Accordingly, unit labour cost dynamics increased close to the rate measured in pre-crisis years, which may result in cost-push inflationary pressure especially in the labour intensive services sectors (Chart 3-37). At the same time, the wage index declined considerably, due to subdued wage growth in the first quarter of the year. Available data suggest that the adjustment in nominal wages was even stronger than the Bank’s expectations. The historically low inflation may result in further wage moderation in the coming quarters. If labour market conditions remain loose, the dynamics of unit labour cost may decline further, and this may facilitate the restoration of corporate profit.

**Chart 3-38**  
Agricultural producer prices

(January 2005–April 2013)



Note: Seasonal products: fruits, vegetables, potato; cereals: wheat, oil seeds; products of animal origin: pork, poultry meat, egg, milk. Weighting was based on the estimated size of the effects on the consumer price index.

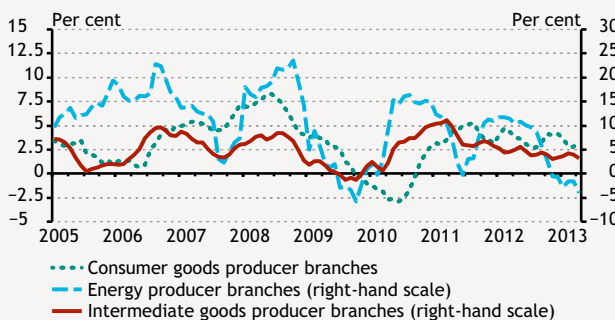
### 3.6.2 PRODUCER PRICES

In 2012, unfavourable weather conditions affected developments in agricultural production not only in Hungary, but globally as well. As a result, rapid increases in producer prices were observed. Since the beginning of the year, however, agricultural producer price inflation has been declining (Chart 3-38). As a result of more favourable harvests in the southern hemisphere, grains were already traded at significantly lower prices on the commodity exchanges in the beginning of this year. In the case of favourable weather conditions, with the appearance of the 2013 harvest, food prices may continue to decline.

In line with this, increases in the prices of domestic agricultural products have slowed. The prices of cereals and seasonal food (vegetables and fruits) declined, while meat product prices increased slightly.

**Chart 3-39**  
Industrial producer prices

(January 2005–April 2013)

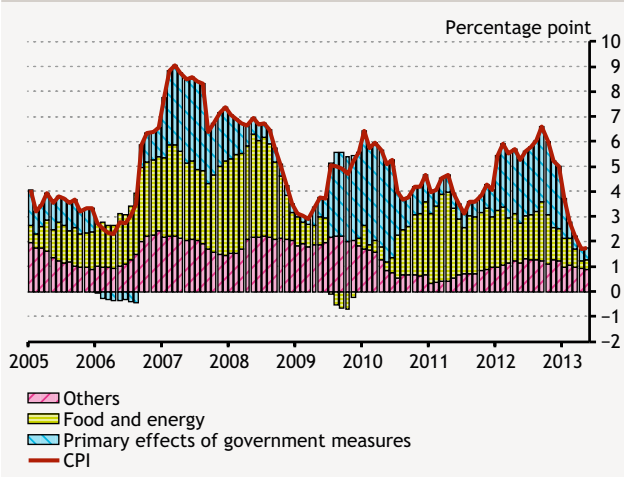


The appreciation of the forint against the US dollar and declining oil prices resulted in a decrease in the producer prices of the power generation sectors. In the case of other sectors, as a result of world market price effects and the appreciation of the forint, the dynamics of industrial prices remained practically unchanged in recent months (Chart 3-39).

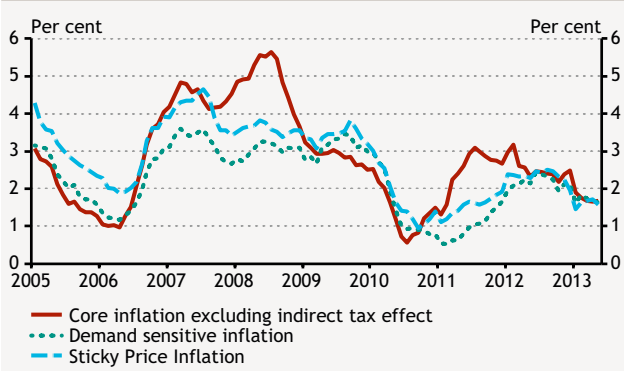
### 3.6.3 CONSUMER PRICES

Inflation declined from a level of around 3-4 per cent early in the year to below 3 per cent in March. As the price index subsequently continued its descent, it dropped below 2 per

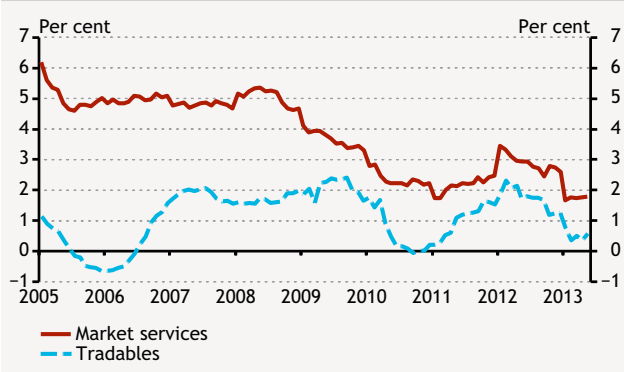
**Chart 3-40**  
**Decomposition of the consumer price index**  
 (January 2005–May 2013)



**Chart 3-41**  
**Developments in core inflation excluding tax changes, the inflation of demand-sensitive products and sticky price inflation**  
 (January 2005–May 2013)



**Chart 3-42**  
**Annual inflation of market services and tradables**  
 (data excluding indirect taxes; January 2005–May 2013)



cent in April and May. The fall in inflation to a historically low level was mainly caused by favourable cost shocks (declining commodity prices, strengthening exchange rate) and a base effect. In addition, however, favourable underlying inflation trends also contributed to the decline in the consumer price index (Chart 3-40). The latter indicates that domestic demand, which remained subdued, continues to have a disinflationary effect. Indicators of underlying developments that exclude the effect of indirect taxes and volatile commodity prices remained at the low levels observed early in the year (Chart 3-41). In recent months, the incoming inflation figures have been more favourable than the expectations of the Bank. A considerable portion of the difference is explained by cost-side factors, namely, the decline in oil prices and the smaller-than-expected increase in commodity prices. In addition, lower industrial goods and market services price inflation also contributed to the difference.<sup>5</sup>

*Tradables* inflation continued to decline in recent months, which may be attributable to the weak demand conditions. The impact of the weaker HUF/EUR exchange rate at the end of last year and beginning of this year has been limited so far. After a longer period of time, durable goods inflation rose to positive territory again in April. This may indicate that the depreciation of the forint exchange rate may have appeared in product prices.<sup>6</sup> A slight increase in non-durable goods inflation has been observed since the autumn of last year, as long as we disregard the effect of volatile one-off factors (significant fluctuations in airfares).

In the recent period, monthly developments in *market services* prices excluding tax changes have broadly corresponded to the values typical in the years following the crisis. As a result, the annual index of this product group excluding indirect taxes continues to be at a historically low level. Developments in market services prices confirm that, against the background of weak demand conditions, companies are primarily improving their profitability by restraining wage costs rather than by increasing their prices (Chart 3-42).

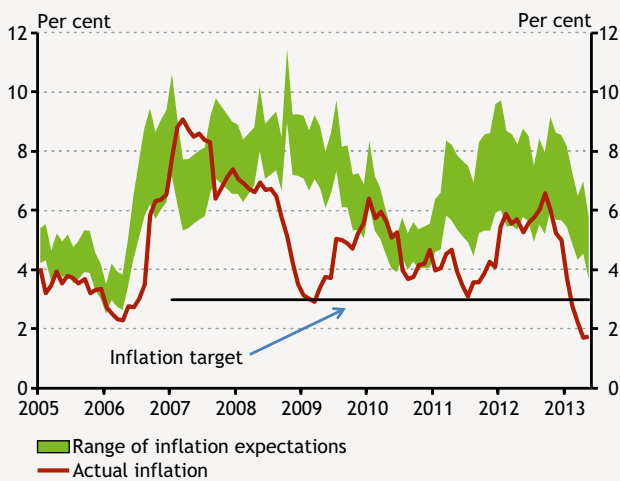
Food price increases have decelerated in recent months, partly due to developments in producer prices. *Unprocessed food* prices have been practically unchanged since last autumn, while seasonally adjusted monthly processed food inflation has been fluctuating around zero since the end of last year. Moderate price dynamics may partly be attributable to the correction of the raw material price

<sup>5</sup> The latter is explained by the lower pass-through of the financial transaction levy on retail financial services.

<sup>6</sup> A similar increase in durable goods prices was last observed in the autumn of 2011, when the exchange rate of the forint weakened.

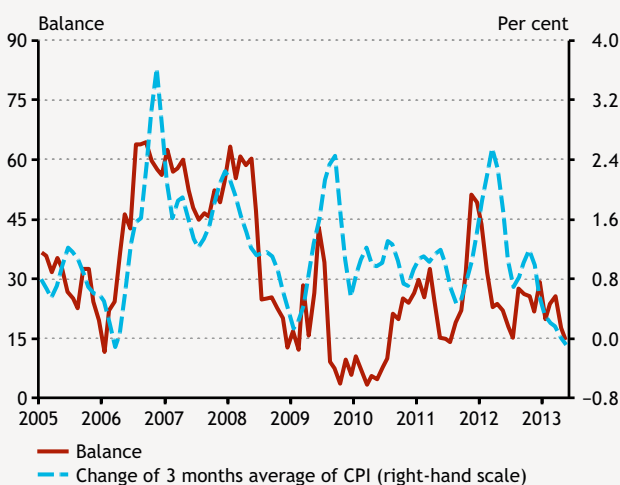


**Chart 3-43**  
Households' inflation expectations  
(January 2005–May 2013)



Source: MNB calculations based on data from the EU Commission.

**Chart 3-44**  
Expected changes in retail sales prices in the next 3 months\* and actual inflation  
(January 2005–May 2013)



\* The balance is the difference between the proportions of corporations expecting price increase and price decrease.

increases and partly to the price-reducing effect of weak demand. Consequently, the subdued food price increases may continue in the months ahead.

As a result of a base effect and current monthly developments, inflation of the *alcohol and tobacco* product group declined. In view of the fall in international oil prices and a base effect, *fuel prices* expressed in forint terms also declined in the recent period.

Inflation in *regulated prices* continued to be moderate; accordingly, the annual index of this category, which had already been low last year as well, continued to decline.

Overall, subdued price increases have been observed in a wide range of products so far this year. Over the short run, inflation will be reduced further by the 10 per cent cut in garbage disposal, water and sewerage charges entering into force as of July, whereas raising the retail margin on cigarettes may result in an increase in the consumer price level. In the medium term, tax measures that add to corporate costs will lead to a gradual increase in core inflation, however the pass-through may be limited by subdued domestic demand even more than expected. Therefore, corporate adjustment can primarily be implemented through wage cost reductions.

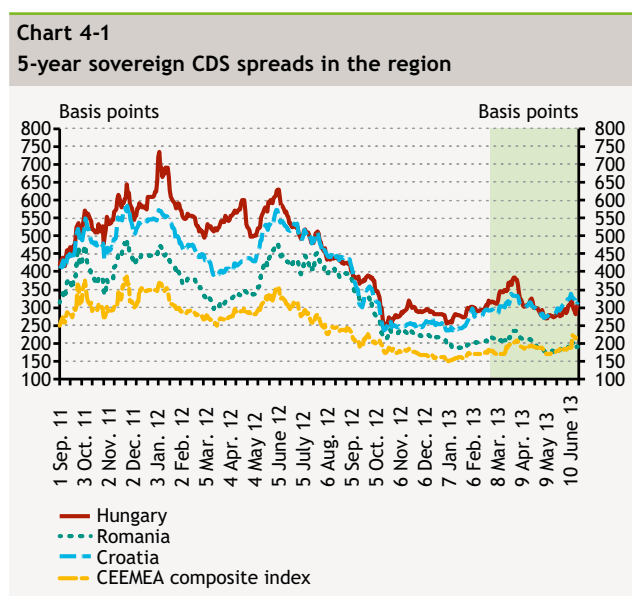
### 3.6.4 INFLATION EXPECTATIONS

Since the end of last year, households' inflation expectations have decreased considerably. This decrease is in line with the developments in actual inflation. The decline in utility costs may have considerably influenced the changes in households' inflation perceptions. Households' declining expectations may facilitate labour market adjustment. In terms of short-term prospective developments in consumer prices, the expectations of the retail trade sector regarding sales prices are a key factor. Compared to the level at the end of last year, expectations declined considerably, which may indicate that the disinflationary effects of weak demand may continue to act as a strong constraint on the pricing decisions of the sector.

# 4 Financial markets and lending

## 4.1 Domestic financial market developments

During the past three months, Hungary's overall risk assessment improved, although domestic asset prices were highly volatile. Market sentiment, which had been favourable at the beginning of the period, deteriorated temporarily, in part due to international factors (e.g. crisis in Cyprus) and in part to domestic factors (uncertainties related to future monetary policy). As of early April, however, global sentiment became positive again, and uncertainties related to the monetary policy of the Magyar Nemzeti Bank declined considerably, resulting in a major improvement in risk perceptions associated with Hungary. At the same time, the deterioration in emerging market sentiment at the end of May strongly affected Hungary as well, entailing a sharp rise in the country's risk indicators. Overall, however, the five-year Hungarian sovereign CDS spread declined from 345 basis points at end-March to 307 basis points in mid-June, in two major waves. The forint appreciated by more than 2.3 per cent against the euro. Following some initial weakening, the forint outperformed other currencies of the region as a result of country-specific news. Apart from minor tensions attributable to banks' balance sheet adjustment, calm trading was observed in the FX swap market. Overall, the long end of the government securities market yield curve shifted downwards more rapidly than its short end, and thus the yield curve became flatter compared to the end-March state. In the favourable global atmosphere, yields declined to record lows at short and long maturities alike, then started to rise during the corrections when international sentiment deteriorated. Based on forward rate agreements, financial market interest expectations became much more volatile than before.



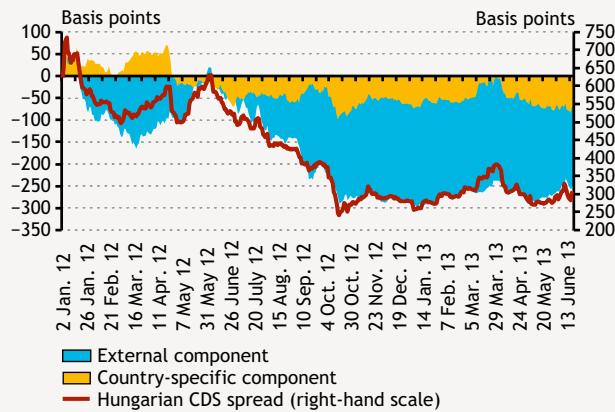
### 4.1.1 RISK ASSESSMENT OF HUNGARY

Over the past three months, an overall improvement was observed in the risk perception of Hungary. However, this change resulted from several contrasting developments. The increase in CDS spread early in the period was primarily caused by uncertain news regarding delays in adopting the rescue package for Cyprus and the tax on bank deposits in Cyprus. However, euro area crisis management calmed the markets (Chart 4-1).

The improvement in the middle of the period can be ascribed to both international and domestic factors. The asset purchase programme announced by the Bank of Japan generated global market optimism, although the deterioration in global growth prospects had a contrasting effect. In parallel with this, from the domestic side, the significant decline in market uncertainties related to domestic monetary policy, abrogation of the excessive deficit procedure for Hungary and the first-quarter growth figures, which exceeded market expectations, all resulted in an improvement in the risk perception of Hungary.

At the end of the period, the statements by the US central bank regarding the phasing out of the Fed's quantitative

**Chart 4-2**  
Factors of the domestic 5-year sovereign CDS spread

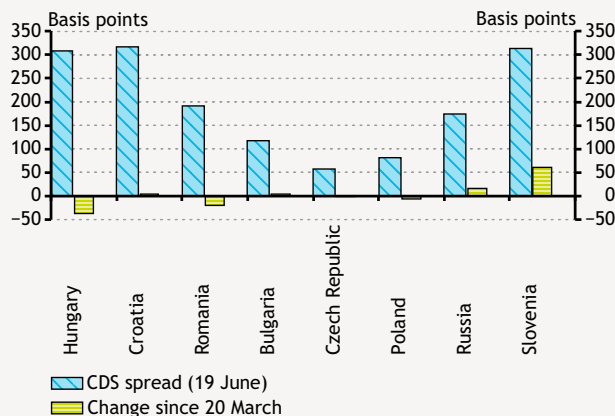


Note: For the methodological description of the decomposition applied, see the following MNB Bulletin article: Kocsis and Nagy (2011): Variance decomposition of sovereign CDS spreads.

easing programme added to uncertainty. The global decline in risk appetite resulted in a decrease in risky asset prices, which was mainly reflected in a rapid increase in emerging market government securities yields. As a result of the above, following a declining trend, the five-year Hungarian sovereign CDS spread fell from 345 basis points at end-March to 270 basis points by early May (Chart 4-2).

The CDS spread increased to 307 basis points by mid-June, and according to our CDS decomposition methodology, this increase was almost exclusively the result of international factors. Overall, during the three months, Hungary outperformed other countries in the region, which is well illustrated by the fact that the indicator for Hungarian country risk sank to below the level of the Croatian CDS spread and also the Slovenian spread, which surged following the country's downgrade (Chart 4-3).

**Chart 4-3**  
Changes in 5-year CDS spreads in the region

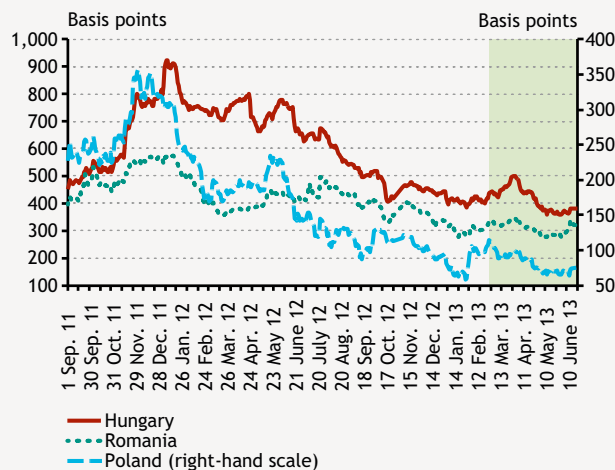


### 4.1.2 DEVELOPMENTS IN FOREIGN EXCHANGE MARKETS

During the period as a whole, the forint appreciated by more than 2.3 per cent against the euro. The exchange rate was highly volatile during the entire period. As a result of strong changes in global and domestic investor sentiment, trading in the currency pair covered a rather wide band. EUR/HUF 285 and EUR/HUF 303 marked the bottom and top of the trading band, respectively.

In a regional comparison, the forint was one of the more volatile currencies. Against the euro, in the period as a whole, stronger appreciation was observed than in the region. In the first half of the period, however, the exchange rate of the domestic currency departed from the regional trends in a strongly negative direction, before being corrected by end-May as a result of some favourable country-specific news. The forint reacted to the waves of the emerging market turbulence in recent weeks in a more sensitive manner, in both negative and positive directions (Chart 4-5).

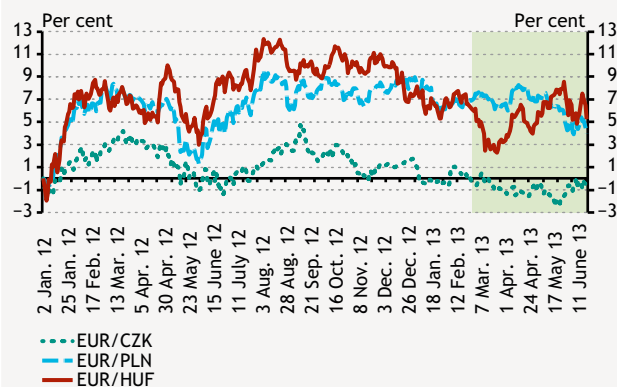
**Chart 4-4**  
5-year euro-denominated currency bond spreads in the region



In the wave of forint weakening, the surge in Hungary's forward-looking risk indicators at the end of the period reflects the uncertainty of the market regarding short-term changes in the exchange rate (Chart 4-6).

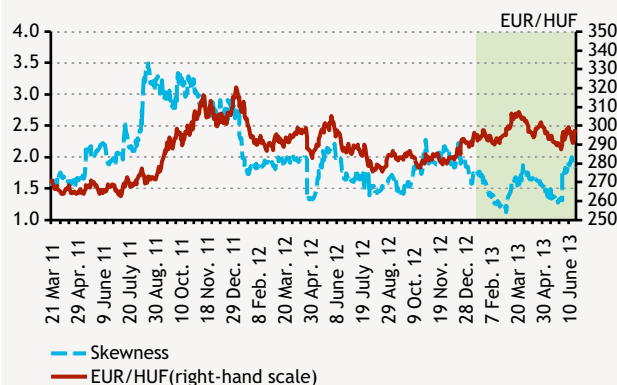
Apart from minor tensions, quiet trading was observed in the FX swap market for the whole period. Apart from the increase in risk premia resulting from the regular, quarterly liquidation of positions related to banks' balance sheet adjustment, swap spreads declined. Minor, temporary fluctuations were caused only by some country-specific

**Chart 4-5**  
Foreign-exchange rates in the region



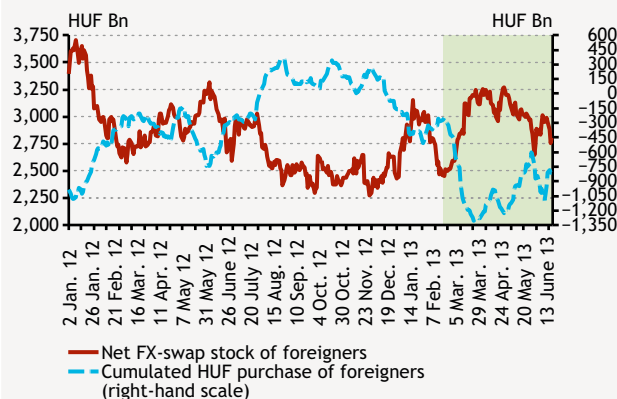
Note: Change compared to the beginning of the year. Positive values indicate appreciation of the regional currency.

**Chart 4-6**  
Changes in the level of the EUR/HUF exchange rate and one-month negative skewness in the distribution of the exchange rate



Note: Skewness = Risk reversal/Volatility\*10 (indicator without a unit of measurement).

**Chart 4-7**  
Non-residents' net forint-foreign-exchange swap holdings and cumulated forint purchases



Note: Non-residents' cumulated forint purchases: 4 January 2010 = 0.

news in April and by the change in international sentiment, which became less favourable at the end of May.

Foreigners' net FX swap holdings decreased considerably, by HUF 370 billion by the end of the period. However, non-residents' cumulative forint purchases rose significantly. The amount of two-week MNB bills held by non-residents declined during the period, while their government securities holdings were up by nearly HUF 240 billion.

### 4.1.3 GOVERNMENT SECURITIES MARKET AND CHANGES IN YIELDS

During the period, demand at the short-term discount Treasury bill auctions was low in most cases. Compared to the announcements, the Government Debt Management Agency (ÁKK) reduced the accepted amount on several occasions, but also increased it sometimes. Overall, the issued quantity was slightly below the envisaged level of issuance. At the same time, despite the low demand, the average yield fell until the issuances in early June, which was consistent with the changes taking place in interest rate cut expectations.

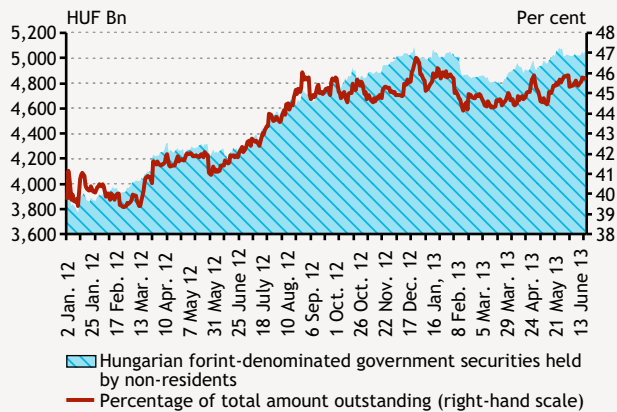
Almost continuously strong demand was experienced in the primary market of long-term government securities. In view of strong demand, the Government Debt Management Agency raised the accepted amount on several occasions, and there was strong demand at Hungarian government securities at non-competitive auctions as well. Foreign currency-denominated fund raising is represented by the increase in the issued amount of the Premium Euro Hungarian Government Bond, which exceeded EUR 1.6 billion by end-May.

The government securities market yield curve became slightly flatter compared to the beginning of the period. The short end of the curve moved down nearly 40-50 basis points from the March levels, while its long end declined by 60-80 basis points, in parallel with a decline in country risk.

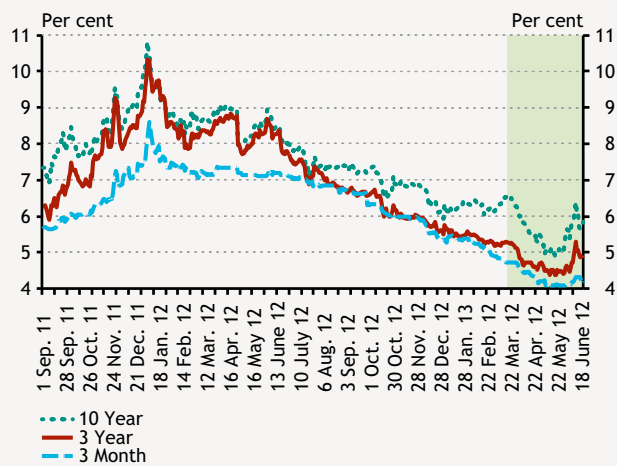
Developments in Hungarian yields were in line with the changes in international sentiment and Hungary's country risk perception. In the benign global atmosphere, yields declined to record lows both at short and long maturities. One-year and five-year yields dropped below 4 per cent and 4.5 per cent, respectively, while the historical minimum of ten-year government securities yields was around 4.8 per cent.

The wave of emerging market asset selling that started following the downturn in global market optimism strongly affected the Hungarian government securities market as

**Chart 4-8**  
Non-residents' government securities holdings



**Chart 4-9**  
Changes in government securities market reference yields



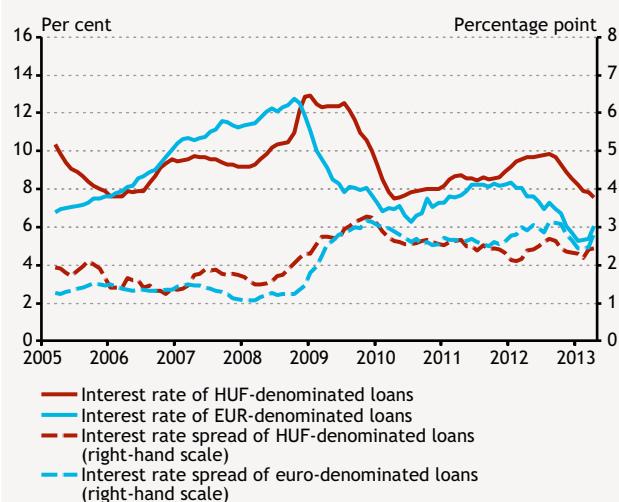
well: in Hungary, depending on maturities, yields increased to various extents, but rapidly in each case, compared to the mid-May levels. At the same time, the 100-150 basis point surge observed at the long end of the yield curve was followed by a quick correction. Accordingly, compared to the beginning of the period, average yields were lower on treasury bills by 45-55 basis points, on five-year government securities by 55 basis points and on ten-year government securities by 65 basis points, by the end (Chart 4-9). The volatility of FX bond spreads was somewhat lower: euro bond and dollar bond spreads declined by 50-55 and 25-35 basis points, respectively.

The changes in forward rate agreements show that the exchange rate movements, which followed a stable path until mid-May, became much more volatile in the uncertain global sentiment. In line with this, the expected bottom of the interest rate cut cycle shifted upwards in parallel with the deterioration in sentiment, before shifting down amidst a renewed increase in risk appetite.

## 4.2 Interest rate conditions in the financial intermediary system

According to the Lending Survey,<sup>7</sup> on the whole, credit conditions remained unchanged in the corporate segment in 2013 Q1. Between January and April, the average interest rate on new loans tracked the decline in the reference rate almost entirely, and thus the spreads rose only slightly. At the same time, in view of the previous steady tightening, the lower, more favourable interest rates continue to be available only for a limited range of companies. In the household segment, based on the interest rates of actual transactions and the Lending Survey, conditions of both housing and consumer lending eased. This meant an additional adjustment following the broad-based tightening at end-2011, but credit conditions continue to be tight in the household segment. Calculated on the basis of banking sector deposit rates, the one-year real interest rate remained practically unchanged, while it declined slightly calculated on the basis of the one-year government securities yield. The level of the real interest rate is still considered historically low.

**Chart 4-10**  
Interest rates and spreads on corporate loans by denomination



Note: Interest rates smoothed by the 3-month moving average. The spread on the moving average of the 3-month BUBOR and EURIBOR, respectively.  
Source: MNB.

### 4.2.1 CREDIT CONDITIONS OF CORPORATE LOANS

Based on transactions, the interest rate on corporate forint loans smoothed by the three-month moving average dropped from 8.2 per cent in January to 7.5 per cent in April. The decrease in the interest rate level was slightly less than the decline in the reference rate (three-month BUBOR); accordingly, interest rate spreads increased from 2.3 percentage points to 2.4 percentage points. Meanwhile, in the case of euro-denominated loans, the interest rate level rose from 2.7 per cent to 3 per cent. As a result of the broadly unchanged reference rate (three-month EURIBOR) in the period, the interest rate spread also increased to a similar extent, from 2.5 percentage points to approximately 2.8 percentage points (Chart 4-10).

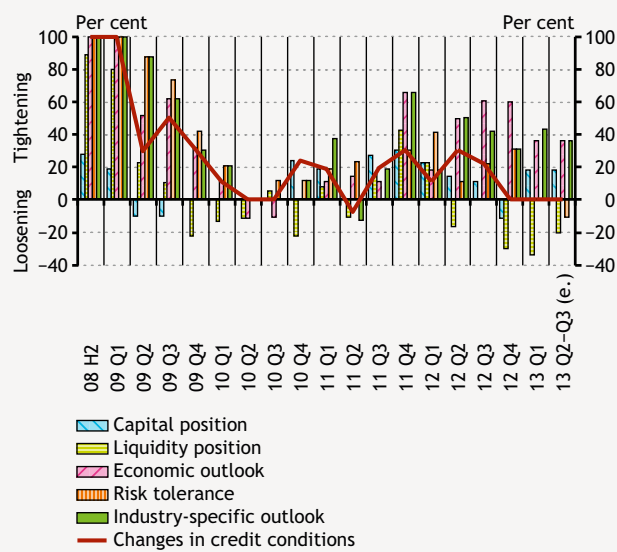
Based on the Lending Survey, corporate credit conditions remained practically unchanged in 2013 Q1, similarly to the previous quarter.<sup>8</sup> Conditions remained unchanged as a result of two offsetting effects: the economic and sectoral outlook as well as the capital position pointed to a tightening of conditions, while banks' liquidity position called for easing (Chart 4-11). Looking ahead, on the whole, banks continue to expect unchanged conditions in the coming half year as well, although in the segment of small and medium-sized enterprises respondents already indicated a net easing, which may also be attributable to the Funding for Growth Scheme.<sup>9</sup> Nevertheless, the absence of further tightening should be evaluated only in the

<sup>7</sup> For a more detailed analysis of the findings of the Lending Survey, see the MNB's new publication entitled 'Trends in Lending': <http://english.mnb.hu/Kiadvanyok/trends-in-lending>.

<sup>8</sup> Net percentage balance of respondents reporting tightening/easing credit conditions weighted by market share.

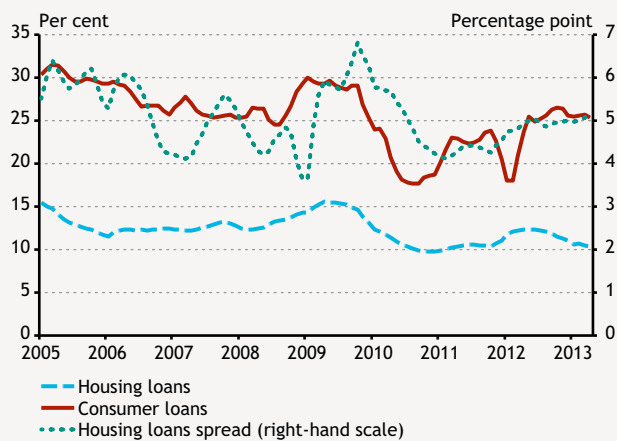
<sup>9</sup> Respondents completed the questionnaires in the first half of April, when the main elements of the MNB's Funding for Growth Scheme were already known.

**Chart 4-11**  
Changes in credit conditions and factors contributing to changes in the corporate segment



Note: Net percentage balance of respondents reporting tightening/easing credit conditions weighted by market share.  
Source: MNB Lending Survey, based on banks' responses.

**Chart 4-12**  
Annual percentage rate (APR) and spread on forint-denominated housing and consumer loans



Note: Interest rates and spread smoothed by the three-month moving average.  
Source: MNB.

context of past developments: in view of the previous wide-ranging tightening it is still valid that only a very limited range of companies have access to credit. At the same time, interest rate conditions are becoming increasingly favourable for them.

### 4.2.2 CREDIT CONDITIONS OF HOUSEHOLD LOANS

In the case of housing mortgage loan transactions, the annual percentage rate of charge (APR) smoothed by the three-month moving average decreased from 10.9 per cent in January to 10.3 per cent in April. The drop in the lending rate only partly followed the decrease in the three-month BUBOR, and thus the spread increased slightly, reaching 5.2 percentage points by April (Chart 4-12).

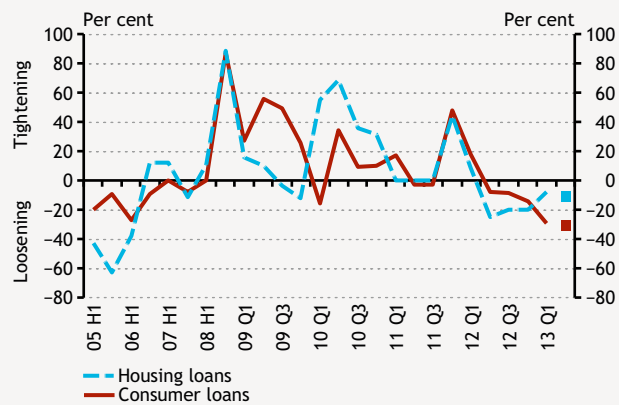
In the case of consumer loans, the annual percentage rate of charge (APR) smoothed by the three-month moving average moderated slightly, from 25.4 per cent in January to 25.3 per cent in April. The decline concerned only home equity mortgage loans, whose APR dropped from 14.4 per cent to 13.6 per cent, while the APR on unsecured consumer loans remained broadly unchanged, still fluctuating at around 27.9 per cent.

In the Lending Survey, a net 8 per cent of banks reported that they had eased the conditions on housing loans and 30 per cent in the case of consumer loans in 2013 Q1. Accordingly, the correction in the broad-based tightening at end-2011 continued. Despite continued corrections, credit conditions are still tight: the interest rate spread on new mortgage loans is above 5 per cent, whereas the loan-to-value ratio (LTV) is 50 per cent on average, while on average it was above 60 per cent prior to the early repayment, and the regulation allows 80 per cent (Chart 4-13).

### 4.2.3 DEVELOPMENTS IN REAL INTEREST RATES

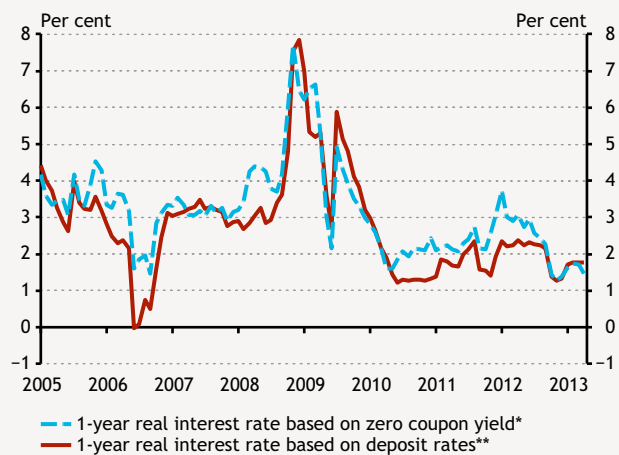
Between January and April 2013, the one-year forward-looking real interest rate calculated on the basis of the one-year government securities yield declined from 1.7 per cent to 1.5 per cent. The underlying reason for the decline is that the fall in the government securities yield exceeded the decrease in analysts' one-year inflation expectations. Calculated on the basis of banking sector deposit rates with maturities of up to one year, there was no major change in the real interest rate. Altogether, the real interest rate is still considered historically low (Chart 4-14).

**Chart 4-13**  
Changes in credit conditions in the household segment



Note: Net percentage balance of respondents reporting tightening/easing credit conditions weighted by market share.  
Source: MNB Lending Survey based on banks' responses.

**Chart 4-14**  
Forward-looking real interest rates



\* Based on the one-year forward-looking inflation expectations of analysts calculated by the MNB using the one-year zero coupon yields and the Reuters poll.

\*\* Based on one-year forward-looking inflation expectations of analysts calculated by the MNB using bank deposit rates with maturity up to one year (weighted average of corporate and household deposits) and the Reuters poll.

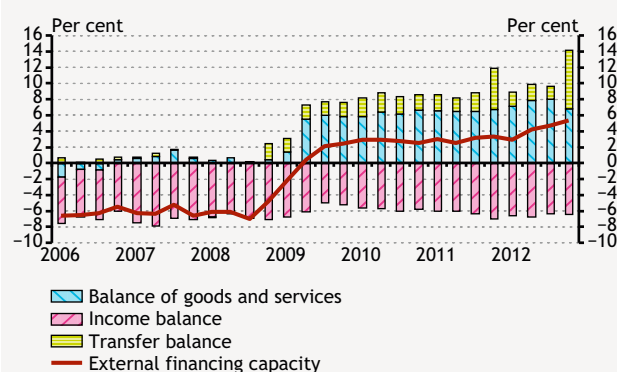


# 5 External position of the economy

## 5.1 External balance and financing

The external financing capacity of the Hungarian economy continued to increase in Q4 2012. The rising surplus of the transfer balance played the main role in this increase, while the goods and services balance declined slightly. In 2012 as a whole, Hungary's external financing surplus amounted to 4.4 per cent of GDP. Our preliminary data suggest that the rise in the external surplus may have continued in 2013 Q1 as well, mainly as a result of the correction of the temporary decline in the goods and services balance at the end of the year. In line with the significant external financing surplus, the outflow of debt-type liabilities accelerated at end-2012. The decline in external debt was primarily related to the banking sector, while nearly unchanged debt levels were observed in the cases of the general government and companies. As a result of the considerable outflows of funds, Hungary's gross and net external debt indicators continued to decline; by the end of the year, net external debt of the banking sector decreased well below pre-crisis levels.

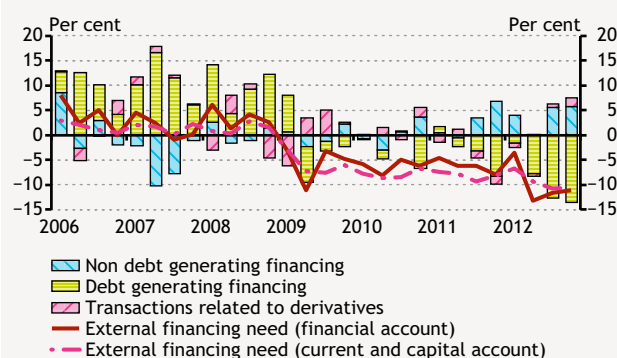
**Chart 5-1**  
Changes in external financing capacity  
(seasonally adjusted values, as a proportion of GDP)



### 5.1.1 CHANGES IN THE EXTERNAL BALANCE OF HUNGARY

Exceeding the historic highs, the external financing capacity of the Hungarian economy increased to nearly 6 per cent of GDP in Q4 2012 (Chart 5-1). According to our preliminary data, the external financing capacity of the economy may have been significant in 2013 Q1 as well. The trade surplus declined in Q4, which was due to a temporary fall in industrial production. Continued weak domestic absorption (consumption and investment) resulted in low imports. At the same time – as a result of the temporary decline in automotive production at the end of the year – exports declined slightly, in line with the slowdown in external economic activity. According to preliminary data, however, the goods and services surplus may have increased during the first quarter again.

**Chart 5-2**  
Structure of external financing  
(transactions as a proportion of GDP)

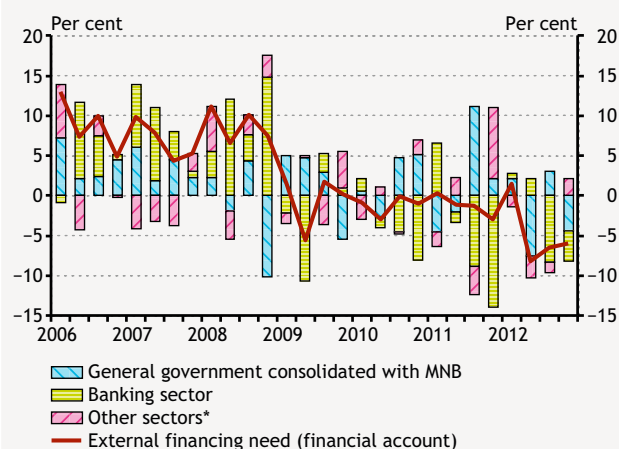


The temporary decline in the surplus on the balance of goods and services in Q4 was offset by the extremely high surplus on the transfer balance, which is attributable to the significant increase in EU transfer utilisation at the end of the year. The utilisation of EU transfers exceeded the values observed in the similar periods of previous years. In Q4, it was close to EUR 1.9 billion, and it amounted to nearly EUR 4 billion in the year as a whole.

### 5.1.2 DEVELOPMENTS IN FINANCING

The significant outflow of funds continued in Q4, mainly affecting debt-type liabilities. Preliminary data suggest that

**Chart 5-3**  
**External financing by sectors**  
*(transactions as a proportion of GDP)*

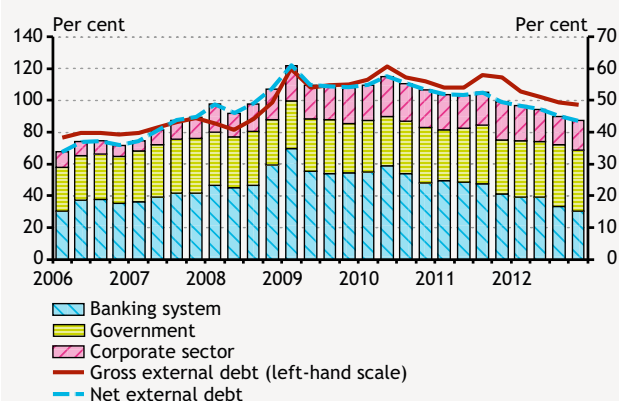


\* Non-financial corporations, other financial corporations, households.

this process was also not interrupted in 2013 Q1, although it slowed down (Chart 5-2).

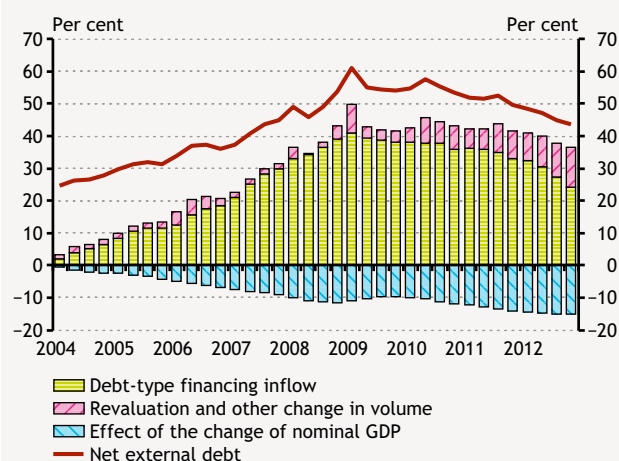
Since Q2 2012, the financial account has shown significant outflows of funds, which is reflected in the declining net external debt as well. Significant outflows (exceeding 10 per cent of GDP) of debt-type items were observed in Q4, which was coupled with a decline in net external debt in the case of both the banking sector and general government. By end-2012, the external liabilities of the banking sector had fallen to nearly half of its net external debt as a proportion of GDP from the initial period of the crisis. At the same time, as a result of non-residents' considerable government securities purchases, no significant decline in the case of the consolidated general government has been observed since 2009. Hungary's net external debt sank below 44 per cent by end-2012, which had been unprecedented since 2007 (Chart 5-4).

**Chart 5-4**  
**Breakdown of net external debt by sectors**  
*(values as a proportion of GDP)*



The adjustment process following the outbreak of the crisis has continued, resulting in a decline in the external indebtedness of the economy. Several factors play a role in the decline of the external debt (Chart 5-5). Economic growth may reduce external debt considerably. As a result, Hungary's external debt has declined by 4 percentage points since end-2008, although with no significant contribution from last year's nominal GDP growth. Revaluation may also have a debt-reducing effect. However, in Hungary it added 4 percentage points to the debt between 2004 and 2008. Since the outbreak of the crisis, external debt increased by a further 8 percentage points as a result of revaluations; nearly half of this is related to 2012. They are partly offset by the decline in debt originating from transactions. As a result of transactions, net external debt decreased significantly – by nearly 15 per cent of GDP – between 2008 and 2012. Nearly two thirds of this was realised in 2012.

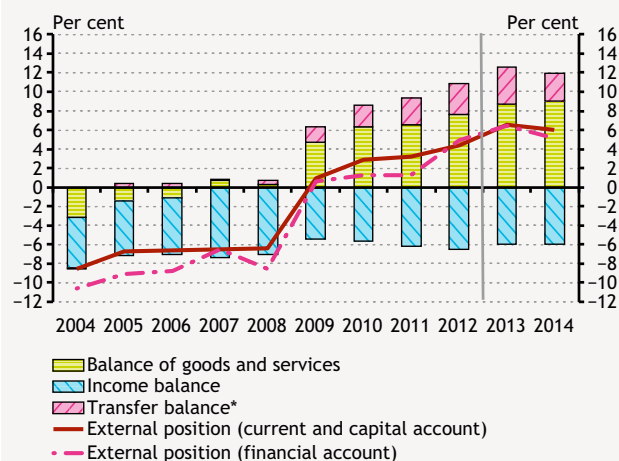
**Chart 5-5**  
**Decomposition of changes in net external debt**  
*(values as a proportion of GDP)*



## 5.2 Forecast for Hungary's external balance position

The external surplus of the Hungarian economy may continue to increase during 2013, and may stabilize at a high level in 2014. This improvement is attributable to a further gradual rise in net exports as well as the increasing use of EU transfers. In addition to subdued domestic absorption (consumption, investment), the slow pick-up in external demand may also contribute to the high trade surplus. Looking at the saving position of individual sectors, it can be concluded that the increase in net savings of the private sector continues to be the determining factor in Hungary's improving external position. Households' net financial savings may remain at a high level as one-off items drop out, which is mainly attributable to the still dominant balance sheet adjustment. In parallel with a further improvement in the external balance, external debt and liabilities may continue to decline, which can be considered advantageous in terms of Hungary's external vulnerability. Of the countries of the European Union, one of the most significant adjustments in the current account experienced since the outbreak of the crisis has been seen in Hungary. As opposed to the considerable pre-crisis deficit, Hungary is expected to record major surpluses in the next two years.

**Chart 5-6**  
Changes in external financing capacity  
(as a proportion of GDP; 2004–2014)



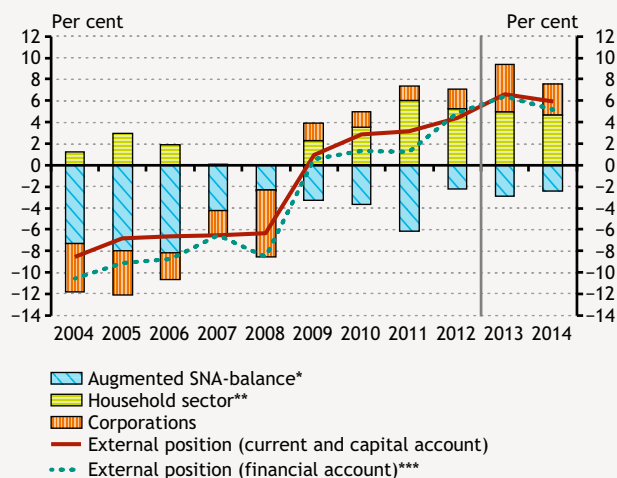
\* The sum of the balance of current transfers and the capital account balance.

The external surplus of the Hungarian economy may continue to grow in 2013 and 2014, mainly as a result of an improvement in the trade balance. The country's net external financing capacity was around 5 per cent of GDP in 2012, whereas this year – primarily as a result of a further expansion in the balance of goods and services – it may amount to nearly 6.5 per cent of GDP. The trade balance may keep the external surplus high over the entire forecast horizon. In addition to subdued domestic demand, the balance of goods and services may be supported by the slow pick-up in external demand as well (Chart 5-6).

This year, the contribution of EU transfers, which account for most of the transfer balance, to net financing capacity may even be higher than last year. At the same time, with the new EU budget planning period starting in 2014, the utilisation of transfers – also taking account of the effect of capital spending carried over – will probably decline. As a result, the transfer balance may significantly contribute to net financing capacity in 2014 as well, although to a somewhat lesser extent than expected in 2013. Accordingly, the surplus of the transfer balance may increase Hungary's net financing capacity by 3-4 per cent of GDP over the forecast horizon.

The external balance surplus may be moderated by the possible stabilization of the income account deficit at a high level in the coming years. This year, however, the deficit on the income account is also expected to decrease slightly, as

**Chart 5-7**  
**Changes in the financing capacities of sectors**  
 (as a proportion of GDP; 2004–2014)



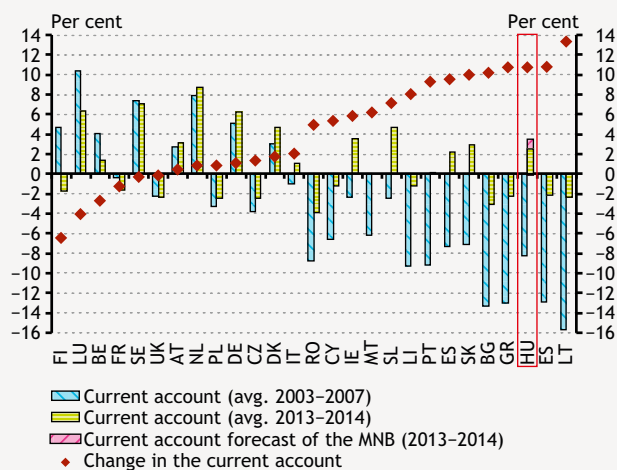
\* In addition to the central government, the augmented general government includes local governments, ÁPV Ltd., institutions discharging quasi-fiscal duties (MÁV, BKV), the MNB and authorities implementing capital projects initiated and controlled by the government but formally implemented under PPP schemes. The augmented SNA deficit takes into account private pension savings.  
 \*\* Net financing capacity of households consistent with the SNA deficit does not contain the pension savings of those who return to the public pension system. The official financing capacity (shown in the financial account) is different from the data in the chart.  
 \*\*\* We expect that 'Net emissions and errors' (NEO) returns to historical average.

a result of the decline in net external debt and lower average annual yields.

In the period ahead, significant savings of the private sector will continue to be determinant, while it will be slightly reduced by the financing requirement of general government. In the private sector, households' net financial savings may stabilize at a high level, even looking ahead. This is the result, inter alia, of the continued balance sheet adjustment, the increase in real wages due to low inflation and the strong precautionary motives. Net savings may increase considerably in the corporate sector in 2013 as a result of profit restoration, this year's continued decline in investment activity and the dynamic rise in EU transfer utilisation. As a result of the pick-up in investment at the end of this year and mainly in 2014, supported by the Funding for Growth Scheme and declining transfer utilisation (which is still significant due to the investment carried over) related to the new EU budget cycle, companies' financing capacity may already fall in 2014 (Chart 5-7).

In the coming years, the considerable external surplus of the economy may continue to lower the external debt and liabilities of the economy. At end-2012, Hungary's net external debt dropped below 44 per cent of GDP, and may decline further in both 2013 and 2014. Accordingly, favourable developments in the indicators that are important in terms of Hungary's external vulnerability are expected to continue in the next two years.

**Chart 5-8**  
**Changes in the current account**  
 (as a proportion of GDP; average of 2003–2007 and 2013–2014)



Note: The current account data in the chart are from the European Commission's spring 2013 forecast.

Looking at the current accounts of the countries of the European Union, significant adjustment is observed in the majority of the economies relative to the pre-crisis period, with one of the greatest adjustments seen in Hungary. Based on the European Commission's spring forecast, in the coming years Hungary may have a significant current account surplus, exceeding the average of pre-crisis years by more than 10 per cent of GDP (Chart 5-8).

## 5.3 Fiscal developments

In our baseline scenario, the accrual-based budget deficit may remain below 3 per cent of GDP and evolve around the government's target in 2013 and 2014 as well. Fiscal developments in recent months point to a higher deficit in both years, but the announced government measures improve our balance expectation to a greater extent.<sup>10</sup> Gross government debt shows a declining trend over the forecast horizon: it may decline to 79 per cent and below 78 per cent of GDP in 2013 and 2014, respectively. The analysis is based on bills submitted until 19 June 2013 and available on the website of Parliament.

### 5.3.1 DEVELOPMENTS IN GENERAL GOVERNMENT BALANCE INDICATORS

According to our forecast, the 2013 ESA deficit may amount to 2.7 per cent of GDP, i.e. our projection calls for a 0.2 per cent balance improvement compared to the March issue of the *Quarterly Report on Inflation* (Table 5-1). *Fiscal developments* (revenue shortfalls, lower-than-expected expenditures) in recent months would result in a deterioration of the balance by 0.3 per cent of GDP on the whole, but the announced *government measures* (freezing of certain expenditures, revenue-increasing measures) decrease our deficit forecast to a greater extent, by 0.5 per cent of GDP. In the case of fiscal revenues, a significant shortfall is observed in the financial transaction levy; therefore, we have reduced our projection regarding both the payments from the private sector and the treasury component. Based on the evaluation of incoming data, we have also revised down our projection concerning

**Table 5-1**  
General government balance indicators  
(as a percentage of GDP)

	2012	2013	2014
ESA-deficit (with complete cancellation of free reserves)*	-2.0	-2.7	-2.5
ESA-deficit (with partial cancellation of free reserves)**	-2.0	-2.7	-2.7
Augmented (SNA) balance*	-2.2	-2.9	-2.4
Cyclical component (MNB)	-0.4	-0.7	-0.4
Cyclically-adjusted augmented (SNA) balance*	-1.8	-2.3	-2.0
Fiscal impulse*	-4.4	0.7	-0.2

\* Complete cancellation of the available free reserves (National Protection Fund) was assumed upon the calculation of the balance indicators.

\*\* Assuming the cancellation of the available free reserves to the extent that ensures the government target.

<sup>10</sup> Convergence Programme, measures aimed at achieving the abrogation of the Excessive Deficit Procedure announced in May and June.

**Table 5-2**  
**Decomposition of changes in the 2013 and 2014 ESA**  
**balances compared to March**  
*(as a percentage of GDP)*

	2013	2014
<b>Revenues</b>		
<i>Fiscal developments</i>		
Financial transaction tax	-0.4	-0.4
Taxes on consumption (VAT, excise duty)*	-0.3	-0.3
Changes in effect of Job Protection Action Plan	0.1	0.0
Revenues from tax collection efficiency	-0.0	-0.2
Mining royalty	-0.1	-0.0
Other taxes and revenues	0.1	0.1
<i>Measures</i>		
Payment of banks due to local government debt consolidation	0.1	0.0
Rate increase of financial transaction levy	0.1	0.2
Other (healthcare contribution, telecommunication tax, mining royalty)	0.0	0.1
<b>Expenditures</b>		
<i>Fiscal developments</i>		
Cash benefits (mostly early retirement benefits)	0.2	0.0
Housing subsidies (in net terms)	0.1	0.0
Net interest expenditures	0.0	0.2
Loss reimbursement for MNB	0.0	0.2
<i>Measures</i>		
Freezing of expenditures of budget chapters (net effect)	0.2	0.2
Nominal freezing of cash benefits	0.0	0.1
Nominal freezing of wages and purchase of goods and services	0.0	0.2
<b>Total change in ESA-balance</b>	<b>0.2</b>	<b>0.4</b>

\* Does not contain the VAT revenue reducing effect of freezing certain expenditures, as the effect of freezing is presented in net terms.

Note: A positive sign improves the balance, while a negative one impairs the balance.

consumption-related taxes (VAT, excise tax). At the same time, our balance expectation is improved by certain expenditures that may be lower than previously expected: early retirement benefits due to the faster-than-expected ending, housing subsidies due to the lower utilisation of the exchange rate cap, net interest expenditures as a result of the fall in yields. The government has announced balance-improving measures in several steps in order to handle the fiscal developments pointing to more unfavourable budget balance on the whole, which may improve the budget balance by 0.5 per cent of GDP in 2013. The effect of measures affects revenues and expenditures equally (Table 5-2).

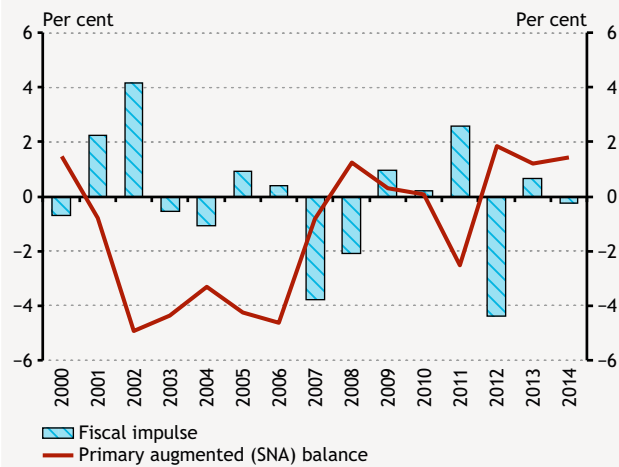
In 2014, the accrual-based deficit may be 2.5 per cent of GDP, in the case of complete cancellation of the free reserves built in according to the Convergence Programme.<sup>11</sup> This allows the government room for manoeuvre of 0.2 per cent to achieve the 2.7 per cent deficit target. Compared to the March issue of the *Quarterly Report on Inflation*, our updated projection is based on a 0.4 per cent balance improvement, with a significant contribution from government measures, in addition to the decline in the expected reimbursement for losses of the MNB. The tax increases effective from August 2013 will have full-year effect in 2014. On the expenditure side, in parallel with the freezing of purchase of goods and services, the nominal freezing of certain cash benefits and the salary base in the public sector also improve the budget balance in 2014. By contrast, this year's fiscal developments (e.g. shortfall in consumption-related taxes) point to an increase in the deficit in 2014 as well. As a result of the aforementioned measures and cash flow developments, our deficit forecast declines by 0.6 per cent of GDP compared to March. Our revision of the assumption concerning the additional revenue from an improvement in tax collection results in a deterioration of 0.15 per cent of GDP in the balance in our forecast for 2014. For 2013, we still expect additional revenue reaching 0.1 per cent of GDP, which may be realised in the second half of the year. Accordingly, as a total annual effect, revenues amounting to 0.2 per cent of GDP are expected in 2014.

### 5.3.2 FISCAL DEMAND EFFECT

Following a significant contraction in demand in 2012, fiscal policy in 2013 already results in an expansion of aggregate demand. For 2013, our indicator measuring the fiscal demand effect signals income growth corresponding to 0.7 per cent of GDP. Most of this targets households, while

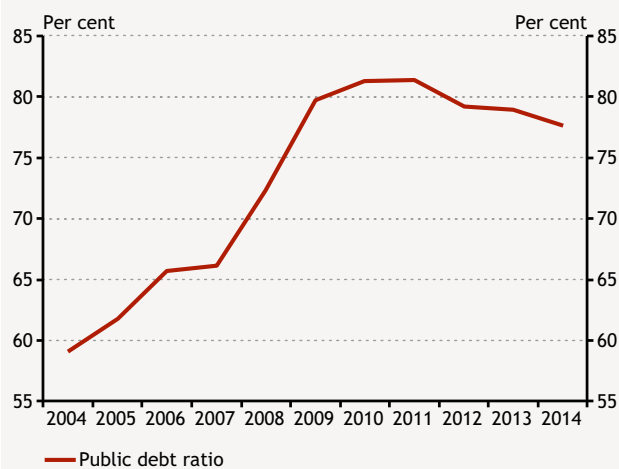
<sup>11</sup> Based on the Convergence Programme, the Budget Bill in 2014 – targeting a 2.7 per cent deficit – may include a safety reserve amounting to 0.5 per cent of GDP, in addition to the general reserve and the reserve set aside for the wage compensation in the public sector.

**Chart 5-9**  
Fiscal impulse  
(as a percentage of GDP)



Notes: 1. Fiscal impulse equals to the change in primary augmented (SNA) balance. 2. Positive sign: expansion in demand; negative sign: contraction in demand.

**Chart 5-10**  
Gross public debt at constant, end-2012 exchange rate  
(as a percentage of GDP)



fiscal policy vis-à-vis other sectors may be neutral overall. The rise in household income is mainly due to reductions in social security contributions, unfolding of the flat rate tax system (phasing out of the half super-gross income tax scheme) and the pension increase, which exceeds inflation. Overall, fiscal policy may cause a slight contraction in demand in 2014, but at the same time an easing of 0.4 percentage points is expected toward households (e.g. due to the teachers' career model, Chart 5-9).

The cyclically adjusted fiscal position (augmented SNA balance) takes into account how large a balance improving effect it would entail if tax revenues were not diverted from their trend by the economic cycle, and also reflects the fiscal costs currently included in the accounting of state-owned companies (e.g. public transport). Compared to the March 2013 forecast, our view of the fiscal effect of the economic cycle has remained practically unchanged. Theoretically, in 2013 and 2014 tax revenues corresponding to 0.7 and 0.4 per cent of GDP, respectively, could improve the balance of the government sector, provided that the economy catches up to its potential level.

### 5.3.3 RISKS SURROUNDING THE BASELINE SCENARIO

Our baseline scenario is surrounded by risks that pertain more strongly to 2014. The delay in the introduction of the electronic road toll and online cash registers may pose a risk on the revenue side of the budget. We have carried out a downward revision of our assumption concerning the additional revenue expected from the efficiency improvement of tax collection, nevertheless, in this respect a risk pointing to a higher deficit can still be identified.

On the expenditure side, the conditional measures announced in May (postponement of investment, reduction in subsidies to state-owned companies), which altogether may reduce the deficit by as much as 0.2 per cent of GDP, may pose a positive risk in terms of the developments in the fiscal balance. In 2014, a higher budget deficit may evolve compared to our baseline scenario if a possible wage differential resulting from the introduction of the teachers' career model necessitates unforeseen expenditures in higher education. In addition, a possible unfavourable judgement by the European Court regarding the telecommunications surtax may represent a negative risk in 2014.

### 5.3.4 EXPECTED DEVELOPMENTS IN PUBLIC DEBT

According to the MNB's financial accounts statistics, gross government debt amounted to 82.2 per cent of GDP at the

end of the first quarter of 2013. Compared to the level of 79.2 per cent at end-2012, the increase was largely caused by a temporary depreciation of the forint, but it also played a role that a considerable portion of the budget deficit evolves early in the year, as well as the fact that net issuance of government securities – for pre-financing purposes – exceeded the size of the deficit.

According to our forecast, assuming an unchanged exchange rate, the debt ratio may fall to 78.9 per cent in 2013 (Chart 5-10). A greater decline in the debt ratio is decelerated by the moderate growth in nominal GDP. The Pension Reform and Debt Reduction Fund as well as the expectation that the deficit on a cash basis will be lower than the accrual-based deficit contribute to the decline in debt. In 2014, the pick-up in economic growth will already contribute to the decline in the debt ratio, so the indicator may sink below 78 per cent, in parallel with a deficit below 3 per cent.

Due to the high proportion of foreign exchange debt, actual developments in debt are highly sensitive to changes in the forint exchange rate as well as to the spending of free foreign exchange deposits available for the budget and of the Pension Reform and Debt Reduction Fund.



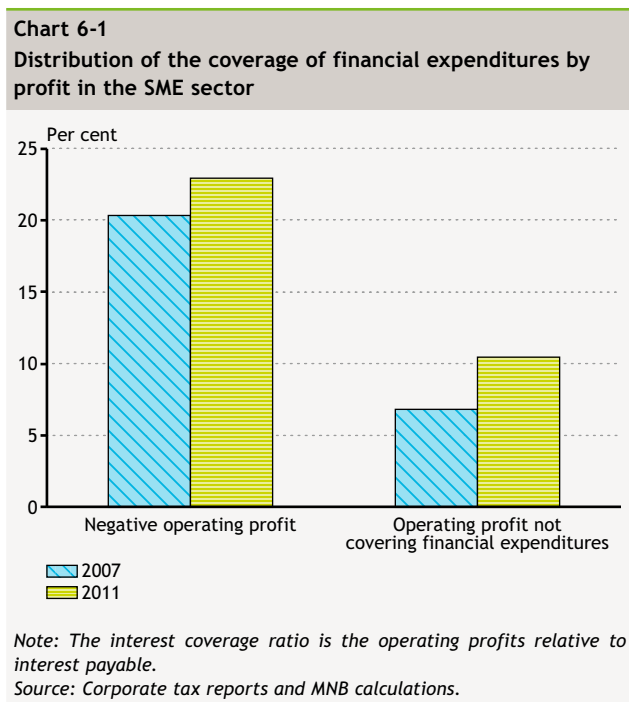
## 6 Special topics

### 6.1 Real economy effects of the Funding for Growth Scheme in our forecast

On 1 June 2013, the Magyar Nemzeti Bank launched its Funding for Growth Scheme (FGS) as a monetary policy instrument to mitigate the disorders observed in lending to small and medium-sized enterprises, strengthen financial stability and reduce the external vulnerability of the country. Over the forecast horizon of the Quarterly Report on Inflation, the FGS may significantly influence developments in lending, the investment activity of the corporate sector and thus economic growth prospects as well. Our analysis presents the anticipated effects of the FGS on growth. The Scheme may result in increases in both credit demand for investment purposes and credit supply. Based on our estimates prepared with various models, GDP is expected to rise by 0.2-0.5 per cent; GDP growth of 0.3 per cent is assumed until end-2014 in the June issue of the Quarterly Report on Inflation. Although methodological reasons allow only a limited comparison of the FGS to other central banks' unconventional instruments, the assumed impact on growth is commensurate with international experiences.

#### 6.1.1 FINANCING SITUATION OF SMALL AND MEDIUM-SIZED ENTERPRISES

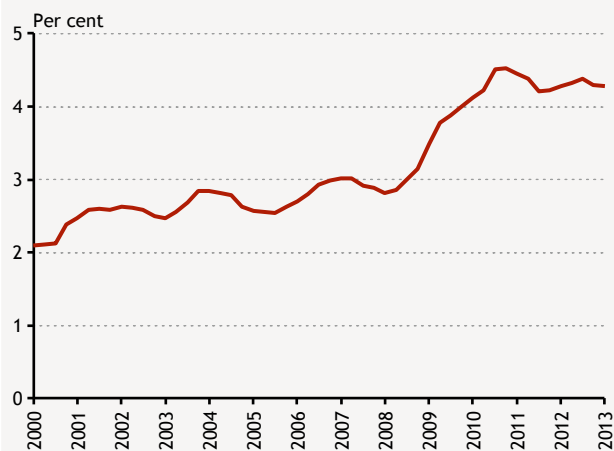
The financial crisis which erupted in the autumn of 2008 forced economic agents that had become excessively indebted in previous years to reduce their debts. The balance sheet adjustment taking place both globally and in Hungary resulted in a persistent decline in demand. In addition, due to the deteriorating corporate portfolio quality, banks' capacity and willingness to lend also declined. Demand and credit supply factors jointly led to a downturn in investment activity. At the same time, the significant slowdown in corporate capital accumulation had a negative impact on the growth potential of economies as well.



In Hungary, similarly to other European countries, small and medium-sized enterprises (SMEs) were especially affected by the weak demand and credit crunch. These companies produce mainly for the domestic market, and thus they were unable to benefit from the recovery of exports and the rapid growth in developing countries. Moreover, only the largest companies finance themselves by obtaining funds directly from the capital market, and bank loans represent the most important external financing source for smaller firms.

Persistently subdued domestic demand had a negative impact on the earnings potential of the SME sector. In the meantime, the instalments of outstanding loans may also have increased. Therefore, overall, the profit from usual business activity covers debt servicing at fewer firms and to a lesser extent on average than prior to the crisis (Chart 6-1). Declining repayment capacity may also have contributed

**Chart 6-2**  
Bankruptcy rate in the corporate sector



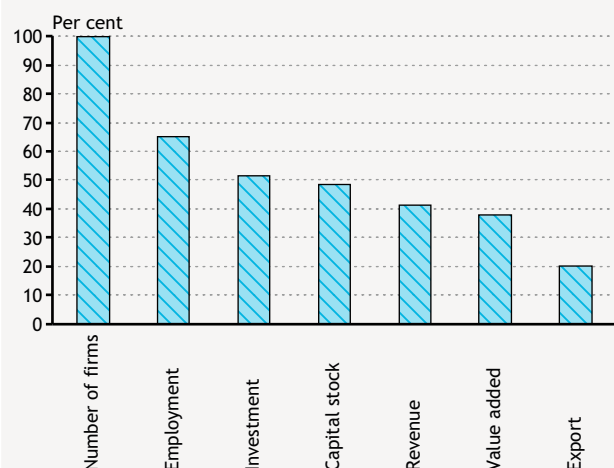
Number of companies in liquidation proceedings as a proportion of operating companies which are legal entities.  
Source: OPTEN.

to the steady rise in the proportion of firms in liquidation proceedings since the crisis (Chart 6-2). Based on data from corporate tax returns, SMEs account for two thirds of corporate employment and half of investment activity; therefore, the funding problems of the sector may have serious impact at macroeconomic level as well.

One of the consequences of the borrowing constraints encountered by small companies was that the easing cycle launched in the summer of 2012 has so far been unable to stimulate lending to this sector. By providing low-interest financing, the FGS may facilitate a pick-up in lending to the SME sector and may thus support growth in the SME sector. In addition, if the Scheme results in a pick-up in investment and a decline in corporate bankruptcies, it may contribute to raising growth potential as well.

### 6.1.2 MAIN IMPACT MECHANISMS OF THE FGS

**Chart 6-3**  
The contribution of small and medium-sized enterprises to the corporate sector



Notes: Based on corporate tax returns.  
Source: NAV, MNB calculations.

The *first pillar* of the FGS provides a total HUF 425 billion of interest-free refinancing loans to banks for lending to SMEs with a fixed (maximum 2.5 percentage point) premium. The *second pillar* of the FGS assists SMEs that have an open exchange rate position by converting their foreign currency denominated loans into forints. The Scheme provides HUF 325 billion of refinancing loans for this purpose, with conditions similar to that of the first pillar.

Fundamentally, the Funding for Growth Scheme influences lending to small and medium-sized enterprises and thus real economic growth through two channels.

- Bank financing which is cheaper than is currently available in the forint loan market stimulates the **demand for credit**, which may be spent by companies on financing new investment or current assets required for production. Investment expands the supply potential of the economy, and thus product market demand and supply increase simultaneously. In the latter case, the size of production capacities remains unchanged, only the rise in goods

market demand and the improvement in capacity utilisation appear in the increase in credit demand.

- The lower instalments improve existing and potential clients' creditworthiness, which may result in an easing of the currently tight credit constraints and a rise in **credit supply**. The new loans are expected to affect mainly those more creditworthy corporate clients that already have bank loans. However, as a result of the Scheme some of the companies that have previously been excluded from bank financing may also receive loans.

The above two mechanisms are surrounded by many **uncertainties**. Therefore, macroeconomic effects that are greater or smaller than the ones we consider to be most likely are also conceivable. The main uncertainties on the **credit demand** side are the following:

- Irrespective of the user cost, companies' intention to expand their capacities may be low due to uncertain growth prospects. In the Lending Survey, banks have been reporting a decline in demand for longer-term corporate loans for a considerable period of time. On the other hand, according to some recent surveys the willingness of companies to implement investment for the purpose of making up for depreciation postponed in recent years may increase in 2013.
- The FGS may theoretically lower participation in other subsidised lending schemes (e.g. by Eximbank or MFB) because it offers more favourable terms. However, if credit supply is indeed an effective constraint on corporate investment, then demand may remain strong for any financing source with below-market rates.
- The current level of indebtedness may still be high for many companies; therefore, they may be less willing to borrow again.<sup>12</sup> In such an environment, companies participating in the programme might use the preferential loans to purchase financial assets (securities, bank deposits), which does not lead to a pick-up in real economic activity.
- In the event that companies spend the loan on financing the down payment required for EU grants, the funds obtained for investment purpose may significantly exceed the amount of the loan. At the same time, in the 2007-2013 EU budget cycle most of the funds serving the stimulation of corporate investment have already been drawn down; therefore, co-financing possibilities of EU projects may be limited.

The main uncertainties on the *credit supply* side are the following:

- One fundamental question is to what extent the Scheme will improve the access to loans of previously credit-constrained companies. The stimulating effect of the increase in lending is expected to be greater if companies previously excluded from lending are able to implement new credit-financed projects. On the other hand, if companies with past access to credit use the Scheme to refinance their previous loans on more favourable terms, the growth stimulating effect may be lower.
- Another fundamental question in connection with access to credit is to what extent the Scheme can reduce the riskiness of corporate loans. The average spread on outstanding forint loans is higher than the maximum 2.5 percentage point level set out in the Scheme. Therefore, the decline in risk originating from the lower interest burdens offsets the collectable low interest rate spread in the case of relatively few potential borrowers. Accordingly, lending within the Scheme would result in deterioration in banks' profitability in a considerable number of cases, offsetting the positive impact stemming from the improvement in portfolio quality. From the credit supply side, the Funding for Growth Scheme may trigger a major pick-up if the transactions concluded within its framework are accompanied by favourably priced, government-sponsored credit insurance as well.

### 6.1.3 ESTIMATES OF THE EFFECTS OF THE FGS

Using our available models, we can provide estimates for the macroeconomic effects of the FGS both from the side of credit supply and the side of aggregate demand. Based on past experience, from the credit supply side we can examine the size of the contribution of the expansion in bank lending to GDP growth. On the credit demand side, we can primarily quantify to what extent the access to cheaper loans (decline in user cost and improvement in liquidity position) increases corporate investment demand. These two approaches estimate the same effect from different directions; therefore, the numerical values cannot be added up.

Macroeconomic effects are expected mainly of the first pillar of the Scheme, as it provides significantly cheaper bank financing for companies compared to the alternatives currently available in the market. The second pillar of the Scheme does not directly increase the volume of loans outstanding, and compared to the foreign exchange loans to be replaced it provides a lower advantage in terms of the interest rate. Consequently, the income transfer provided for companies is also less than in the first pillar.

<sup>12</sup> Based on past international experiences, corporate balance sheet adjustments are protracted and are coupled with a significant decline in leverage: by the fourth year of the balance sheet adjustment, the debt to equity ratio declines by an average of 15 percentage points. See: RUSCHER, E. AND G. WOLFF (2012), "Corporate balance sheet adjustment: stylized facts, causes and consequences", *European Economy, Economic Papers*, 449, February.

The macro effects of the FGS were examined using four types of methods:

- **Estimation of the impact of credit supply shocks on growth using aggregate time series.**<sup>13</sup> The real economy effects of the credit supply shocks on the corporate loan market were quantified with the help of a structural vector autoregressive (SVAR) model. The model was estimated on quarterly data between 1995–2009; the credit supply shocks were identified using a sign and zero restriction identification scheme. The effect of the FGS on GDP was estimated with the help of these credit supply shocks: a credit supply shock resulting in additional loan outflows of approx. HUF 170 billion is expected to increase the level of GDP by 0.3–0.5 per cent by end-2014.
- **Estimation conducted on micro data regarding the investment activity of manufacturing companies.**<sup>14</sup> In the neoclassical investment model, corporate investment demand is explained by user cost and productivity. In addition, in the case of borrowing constraints, the cash flow situation may also play a role, as it may be the proxy variable of the company's creditworthiness. The results of earlier estimates for manufacturing companies' investment demand were used for our calculation. First, as a result of the FGS, companies' costs of obtaining external funds will decline, reducing the user cost. Second, the decline in the repayment burden on outstanding loans improves corporate cash flow. Their quantified values were included in the investment equation estimated in the article. The increase in investment expected on the basis of the estimate may result in approx. 0.2 per cent higher GDP.
- **Estimation conducted on micro data regarding the effect of foreign exchange loans on investment.**<sup>15</sup> In this approach, we examined the size of the contribution of foreign exchange loans to the increase in corporate investment between 2004 and 2008. During this period, the interest rate differential between forint and foreign exchange loans was persistently high, while the exchange rate was relatively stable. In addition, foreign exchange loans may have contributed to the easing of liquidity constraints, i.e. companies that had not received loans earlier also gained access to credit. Our estimate quantifies the increase in investment by companies with foreign exchange loans due to the interest rate differential and the easing of liquidity constraints, compared to similar firms that did not have foreign exchange loans. For the analysis of the effect of the FGS, we quantified its effect on the average interest rate of outstanding loans; then we compared it to typical the interest rate spread in the estimation period. The average decline in lending rates expected of the FGS may add some 0.2–0.3 per cent to the level of GDP through higher investment activity. As the premium that can be charged by banks is limited, the FGS will presumably be available for enterprises that are more creditworthy than the average. Therefore, if the scheme does not ease credit supply constraints, this method may overestimate the effects of the FGS.
- **Estimation conducted on macro time series concerning investment and credit demands.**<sup>16</sup> Corporate investment and lending activities were estimated using a vector error correction model (VECM) on data between 1997 and 2008. The model identifies three long-term correlations: investment and credit demand depend on output and the average cost of credit, whereas credit supply is determined by the aggregate cash flow of the corporate sector. We modelled the FGS as a decline in the corporate sector's credit cost. Based on the impulse response functions of the model, the pick-up in investment may increase the level of GDP by approximately 0.3 per cent.

Overall, the supply and demand side estimates result in similar findings. According to the credit supply side estimation, the level of GDP may rise by some 0.3–0.5 per cent by end-2014. The demand side approaches indicate a somewhat lower, approximately 0.2–0.3 per cent impact on growth. In the baseline scenario of the *Quarterly Report on Inflation*, a growth effect of 0.3 per cent was assumed, which is close to the average of the various approaches.

<sup>13</sup> TAMÁSI, BÁLINT AND BALÁZS VILÁGI (2011), "Identification of Credit Supply Shocks in a Bayesian SVAR Model of the Hungarian Economy", *MNB Working Papers*, 2011/7.

<sup>14</sup> KÁTAY, G. AND Z. WOLF (2004), "Investment Behaviour, User Cost and Monetary Policy Transmission – the Case of Hungary", *MNB Working Papers*, 2004/12.

<sup>15</sup> ENDRÉSZ, M. AND P. HARASZTOSI (2013), *The Effect of Loan Dollarization in Boom and Bust: The Case of Hungary*, manuscript.

<sup>16</sup> ENDRÉSZ, M. (2011), "Business Fixed Investment and Credit Market Frictions. A VECM Approach for Hungary", *MNB Working Papers*, 2011/1.

## 6.1.4 COMPARISON OF THE ESTIMATED EFFECTS OF THE FGS TO INTERNATIONAL EXPERIENCES

The expected effects of the Funding for Growth Scheme are worth comparing with empirical results regarding other unconventional central bank tools and state subsidies to SMEs. However, the comparison is hindered by two factors. First, central bank programmes implemented since the crisis are very different from the FGS.<sup>17</sup> Second, contrary to the international examples reviewed, only the first pillar of the MNB's Scheme – targeting the stimulation of lending in the most direct manner – results in an explicit increase in the Bank's balance sheet. The impact of unconventional central bank tools can be conveniently measured by their effect on GDP relative to the change in the central bank balance sheet. Therefore, for lack of better basis of comparison, we compared the growth impact of the FGS to the size of its first pillar.

Most findings related to the unconventional instruments of the institutions reviewed suggest that if the programmes expand by 1 percentage point of GDP, the level of GDP can rise by 0.1–0.3 percentage points.<sup>18</sup> According to our calculations, the FGS will add 0.2–0.5 percentage points to the level of GDP. Within this total effect, the first pillar – amounting to approximately 1.4 per cent of GDP – is expected to dominate. Accordingly, keeping in mind the limited nature of the comparison, the effect expected of the Scheme can be considered similar to international experiences.

In a sense, the first pillar of the FGS is more similar to state-subsidised SME loans than to other quantitative easing programmes; therefore, we also aimed to assess the international experiences related to these. Based on the experiences of several loan programmes in Italy, some three-quarters of the loans extended within the given programme served the refinancing of earlier loans, and total outstanding loans only increased by one-quarter or one-fifth of the amount of the programme.<sup>19</sup> In the first pillar of the FGS, a net HUF 170 billion increase in loans outstanding is expected of the HUF 425 billion programme. The refinancing ratio is thus expected to remain around 60 per cent, slightly lower than past experiences in Italy.

<sup>17</sup> The FGS cannot be classified either as a liquidity providing or an asset purchase programme. Although half of the collateral for the refinancing loan is provided by the SME loan, which does not belong to the normal scope of central bank collateral, the expected impact of the Scheme does not stem from the easing of liquidity constraints. The reason is that the forint liquidity in the banking sector would already allow an expansion in lending. On the other hand, the FGS cannot be compared to asset purchase programmes either, as it involves secured lending to the banking sector.

<sup>18</sup> For a summary of the empirical analyses of international experiences see, e.g. IMF (2013), "Unconventional Monetary Policies – Recent Experience and Prospects", *IMF Policy Papers*, April 18. The growth effects estimated by various authors were compared to the increases in central bank balance sheets as a proportion of GDP.

<sup>19</sup> CARMIGNANI, AMANDA AND ALESSIO D'IGNAZIO (2011), "Financial subsidies and bank lending: substitutes or complements? Micro level evidence from Italy", *Temì di discussione*, No. 803, Banca d'Italia,

## 6.2 Cyclical and structural effects underlying the developments in unemployment

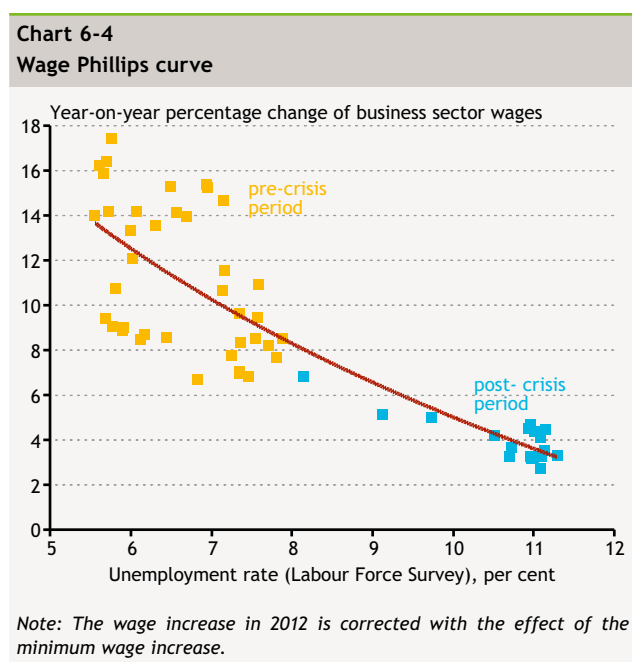
Since the fall in GDP in 2008, the domestic labour market has been influenced by several major effects. Employment decreased as a result of the fall in aggregate demand. In parallel with this, the number of the active increased in view of the Government's measures stimulating labour market participation. As a result of the two effects, the unemployment rate has increased, and currently exceeds the pre-crisis level as well. Following the rise in the unemployment rate, the number of long-term unemployed also increased. Although private sector employment grew since the bottom of the crisis, only public work programmes were able to add to the number of vacancies. The labour market can be considered slack.

Unemployment can be caused by either cyclical or structural reasons. Cyclical unemployment restrains increases in wages, as in this case more applicants than usual apply for relatively fewer vacancies, strengthening employers' positions in wage negotiations. If unemployment is attributable to permanent, structural reasons, adjustment in nominal wages is more moderate. As the domestic labour market has been characterised by a high level of unemployment for nearly five years, while the number of vacancies is still below pre-crisis levels, it is worth examining if a part of unemployment is due to structural reasons. The reasons behind unemployment considerably influence our view on the medium-term dynamics of wages.

### 6.2.1 POSSIBLE CONCLUSIONS DERIVED FROM AGGREGATE DATA

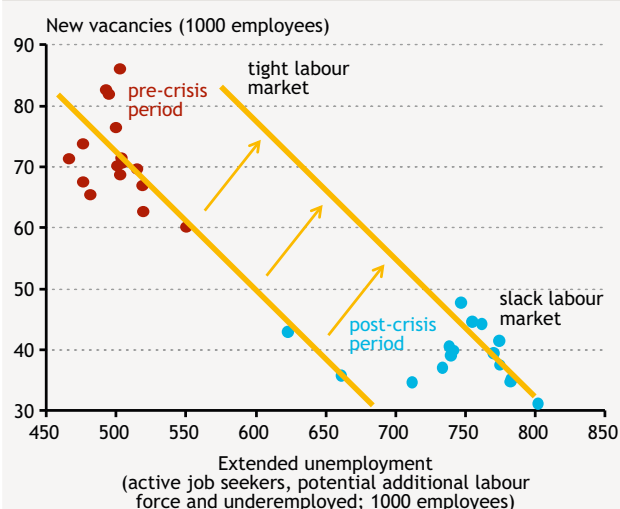
In recent years, the annual wage index has declined by some 2 percentage points on average (disregarding the effect of the minimum wage increase in 2012). At the same time, in the period since the start of the crisis the growth rate of real wage costs considerably exceeded the growth rate of productivity. Based on our first statement, there is a negative relationship between the unemployment rate and the wage index (the so-called Phillips-curve) in Hungary as well. However, on the basis of the second statement it is not clear what proportion of the unemployed is constituted by those

groups that may have generated an actual wage reducing effect while competing with each other for the same vacancies. Thus, further investigation is needed to make a clear picture on this.



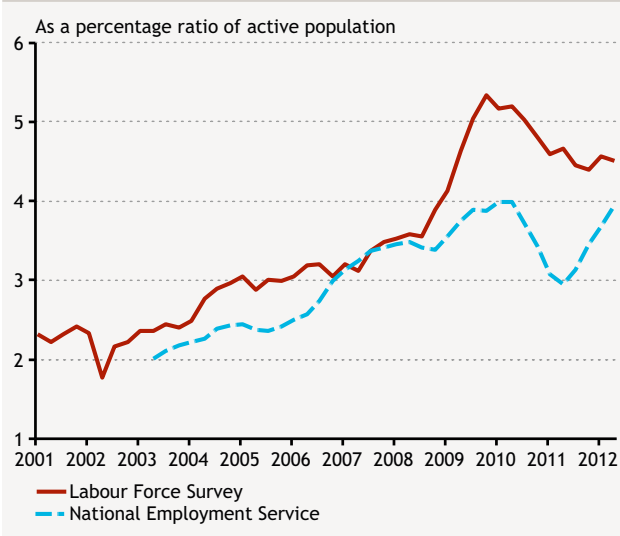
The so-called Beveridge curve presents the negative correlation between the number of unemployed and vacancies; thus it is a suitable tool to separate the cyclical and structural shocks appearing in the labour market. Downward movement on the curve indicates a looser labour market, whereas a change in the opposite direction indicates a tighter labour market. In a recession, there is a downward movement on the curve. In this case, there may be fewer vacancies for several reasons: in a recession, companies restrain their production and investment, the profitability of future production growth deteriorates, financing problems may appear, production costs rise and uncertainty increases. Therefore, both employment and the number of new vacancies drop, jointly resulting in a downward movement on the Beveridge curve.

**Chart 6-5**  
Possible Beveridge curves



Notes: Unemployment data is calculated on the basis of Labour Force Survey.

**Chart 6-6**  
Long-term unemployment rates



to these groups – and within that mainly the number of underemployed part-time workers – has increased since the crisis.

Based on the Beveridge curve calculated using extended unemployment, since the bottom of the crisis Hungary may stay on a shifted curve, i.e. partly there may be structural reasons as well for high unemployment. This is also indicated by the fact that the ratio of long-term (over one year) jobseekers exceeds the pre-crisis level.

## 6.2.2 DETAILED EXPLANATIONS TAKING ACCOUNT OF HETEROGENEITIES

Mismatch between labour demand and labour supply may be explained by two main factors: educational or regional differences (the latter one originating from the lack of mobility). A suitable tool for the quantification of the educational mismatch is the SMI (*skill mismatch index*) published in the article by Estevão and Tsounta (2011); the use of this index has become very widespread recently. We quantified this index using Hungarian data and prepared the *regional mismatch index* (RMI), its counterpart that measures regional matching problems. The method of producing these indices is described in detail in the Box 6-1.

While the movement on the curve may be explained by cyclical factors, a shift in the curve may usually indicate structural reasons, i.e. a mismatch between the structures of labour demand and labour supply. There may be several reasons for the increasing mismatch. A protracted recession adds to the period spent in unemployment, which leads to potential employees' obsolescence of knowledge and skills (*hysteresis*) and may be an obstacle to the decline in the unemployment rate. Beside *hysteresis*, the matching may also deteriorate if structural transformation is going on in the economy: certain sectors decline, while others grow rapidly. The cyclical adjustment of labour supply usually takes place slowly; therefore, unemployment may rise temporarily, while the number of vacancies is high. Finally, the matching may be influenced by labour market policies as well: the government may influence the matching of labour demand and labour supply by various means. They include unemployment benefits and active labour market policies (e.g. retraining, labour mediation), but educational and development policies also play a role over the longer term.

Based on the Beveridge curve, the domestic labour market has been slacker since the onset of the crisis, as there are much fewer vacancies while unemployment is still higher. However, it is not clear whether structural problems explain the changes in the curve in recent quarters. To decide this, we examined how the Beveridge curve would have changed using an extended unemployment category (Chart 6-5). The unemployed in an extended sense include groups that are inactive or belong to the group of employed according to official statistics, but based on their labour market role could be classified as unemployed. First, those part-time employees belong to this category who would like to work a higher number of hours. Second, this category covers the inactive that can be classified into the so-called potential additional labour reserve: those, who could work but do not want to (*discouraged worker effect*) or those who would like to work but cannot for some reason. The number of people belonging

**Box 6-1****Labour market mismatches and their measurement**

The SMI is an indicator that quantifies labour market mismatches. There may be a problem of matching if the structure of labour demand in terms of qualifications is different from the structure of labour supply: for example, if typically low-qualified labour is needed in an economy, while a significant portion of the labour supply consists of university/college graduates. Mismatch may be regional as well, if, for example, labour demand is relatively higher in the more developed regions of an economy, while high unemployment is typical of the underdeveloped regions. Solutions to the former and the latter may be retraining programmes and stimulation of mobility within the country, respectively.

For quantification, the labour market has to be segmented in terms of regions and qualifications. The highest educational level variable may be suitable for the measurement of qualifications. Segmentation by definition entails the condition that mobility between the partial labour markets is not possible.

The value of the SMI can be determined for a given region in a given period on the basis of the formula given below. This index number is the sum of the differences of the squares of the distribution of labour demand (D) and labour supply (S) according to qualifications. Namely, it measures the difference between the need for people with various school qualifications in a given region at a given time and the available labour with such qualifications. The unit of measurement of the SMI cannot be interpreted. If the structures of labour demand and labour supply are identical, the SMI is zero, in the case of an extreme difference it is 1.

$$SMI_{it} = \frac{1}{n} \sum_j \left[ \frac{S_{ijt}}{\sum_j S_{ijt}} - \frac{D_{ijt}}{\sum_j D_{ijt}} \right]^2$$

- $i$  - region
- $j$  - highest educational level
- $n$  - number of school qualification categories
- $t$  - year
- $S$  - number of the active (labour force survey)
- $D$  - number of employed (labour force survey)

By exchanging the regional and the qualification variables, regional matching can also be examined. In this case, the RMI shows the difference between the regional distribution of labour demand and labour supply in a given qualifications group in a given period.

Source: ESTEVAO, MARCELLO AND EVRIDIKI TSOUNTA (2011), "Has the Great Recession Raised U.S. Structural Unemployment?", *IMF Working Paper*, WP/11/105.

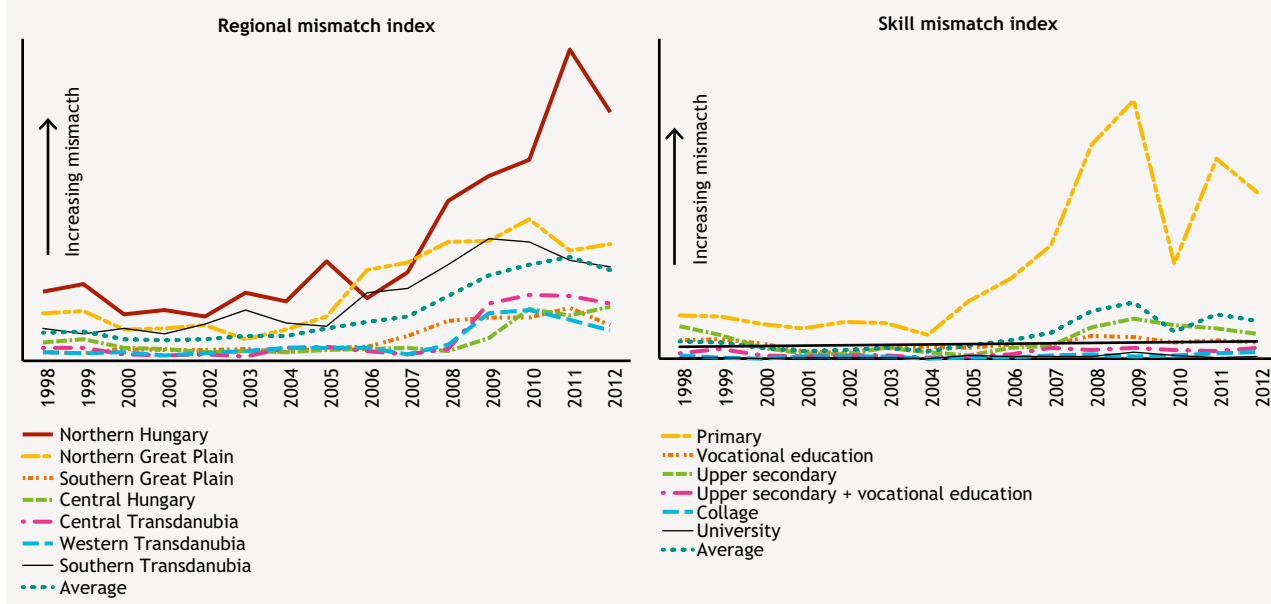
Several important conclusions may be drawn on the basis of the SMI. Mismatches were already observed in the pre-crisis years. The average SMI has been rising roughly from the mid-2000s. However, this trend was further exacerbated by the crisis from 2008, which may also have resulted in a shift in the Beveridge curve. Major mismatch between the qualifications structures of labour demand and labour supply is experienced in the more disadvantaged regions (Northern Hungary, Northern Great Plain, South Transdanubia). The pause in the increase in the SMI observed since 2011 is presumably the result of the public work programmes launched in these regions. Although the SMIs of the more developed Transdanubian regions surged during the crisis, their magnitude still remain below the national average.

Based on the RMI measuring the regional heterogeneity of labour demand and labour supply, a major mismatch is observed in the group with the lowest school qualifications. This mismatch can also be traced back to the years well before the crisis: the index started to rise roughly around the time of the decline in domestic textile industry (mid-2000s). The regional mismatch of those with low education may also be the consequence of the low mobility within the country. As a result of the public work programmes, regional mismatches also started to ease from 2010, although these jobs are only temporary, so they cannot provide a permanent solution to the problem of structural unemployment.

The existence of *skill mismatch* causes losses to the economy over the longer term. If there is a shortage of labour, companies can react in various manners:



Chart 6-7  
Labour market mismatches



- they employ under- or overqualified employees or ones with inadequate skills, resulting in a loss in efficiency;
- they train the workforce themselves, which makes employment more costly;
- they compete in the labour market for the employees that meet their expectations, and pay them higher-than-usual wages;
- they do not fill the vacancies, which reduces output and productivity.

Oversupply of labour with given qualifications reduces wages, increases unemployment, and in the case of the long-term unemployed it results in the wasting of expenditures spent on education because of the obsolescence of skills and the knowledge obtained. At the macroeconomic level, each type of imbalance may add to equilibrium unemployment, and through that it reduces potential output.

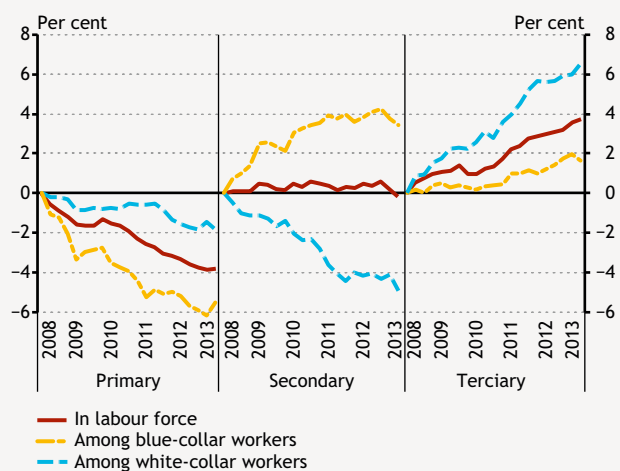
Employment mismatch, however, may have positive effects as well in certain cases. Employment of overqualified labour may entail higher productivity as well; these employees may be more creative and all-round (although according to empirical analyses they underperform compared to their abilities). Employment of overqualified labour increases in times of recession reducing unemployment among the highly qualified. On the other hand, in the case of companies its result may be that in the upswing phase of the cycle, when the labour market becomes tight, the company does not have to compete for qualified employees.

At the same time, employment of highly qualified labour in jobs that require lower qualifications may result in a *crowding out* of the employees with low educational level from the labour market, and because these groups already face higher unemployment rates, they have higher chances to remain unemployed over the longer term.<sup>20</sup>

This phenomenon can be observed in Hungary as well. The unemployment rate of those with low school qualifications started from a higher level and increased to a greater extent compared to the unemployment of those with a higher educational level. Some of the underlying reasons are demographic: the educational level of the labour force is rising (the ratio of university/college graduates within the active population is increasing). The crisis amplified these trends to some extent: within intellectual occupations, the ratio of university graduates to high-school graduates is increasing, while within blue-collar occupations the number of high-school graduates is rising compared to those who have not completed secondary education. At the same time, employees without a high-school diploma are crowded out of the labour market, become inactive and have high chances to become unemployed for a long time.

<sup>20</sup> For details see: EUROPEAN COMMISSION (2013), "Employment and Social Developments in Europe 2012", *Staff Working Document*.

**Chart 6-8**  
Ratio of groups with various levels of education within employment



Note: Elementary – no high-school diploma; secondary – with high-school diploma; higher – college or university graduates.

### 6.2.3 CONCLUSION

Structural unemployment in Hungary has already started to rise before the crisis, around 2005. The global crisis that started in 2007–2008 considerably increased the unemployment rate, further exacerbating structural tensions. The ratio of those unemployed for structural reasons has not increased further in the recent years – to a great extent due to the start of the public work programmes. However, the ratio of those unemployed because of mismatches between labour demand and supply has been higher than in the years around the change of the millennium for a longer period, suggesting that the long-term equilibrium rate of unemployment has also increased. Easing of structural problems may be supported by measures making the labour market more flexible, facilitating mobility, and a reform of the education system.

Our examinations suggest that beside structural factors, a large part of unemployment is caused by cyclical effects, which may considerably decrease the wage index in the

next years. This channel may strengthen as the changes of the income tax system come to their end.

# 7 Technical annex: decomposition of 2013 average inflation

**Table 7-1**  
Decomposition of the inflation into overlapping and incoming effects

(2013)

	Effect on CPI in 2013		
	Overlapping effect	Incoming effect	Yearly index
Administered prices	0.1	-0.7	-0.6
Market prices	0.4	1.0	1.4
Indirect taxes and government measures	0.3	1.0	1.3
<b>CPI</b>	<b>0.7</b>	<b>1.3</b>	<b>2.1</b>

Note: The table shows the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of the so-called overlapping and incoming effects. The overlapping effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects changes in the current year. We decomposed these indices to the sub-aggregates of the consumer price index and calculated the inflationary effects of the changes in indirect taxes, administered prices, and market prices (not administered prices excluding indirect tax effects). The indirect taxes and government measures also include the effect of increase in the retail margin on cigarettes.

**Table 7-2**  
Detailed decomposition of our inflation forecast to overlapping and incoming effects

(2013)

	2013				Yearly index
	Average overlapping effect	Overlapping indirect tax effect	Average incoming effect	Incoming indirect tax effect	
Food	1.4	0.0	1.6	0.0	3.0
non-processed	1.7	0.0	3.8	0.0	5.6
processed	1.2	0.0	0.7	0.0	1.9
Traded goods	0.4	0.0	0.4	0.0	0.9
durables	-0.9	0.0	-0.5	0.0	-1.4
non-durables	1.0	0.0	0.8	0.0	1.8
Market services	0.6	0.3	1.2	2.0	4.3
Market energy	3.7	0.0	-2.2	0.0	1.5
Alcohol and tobacco	1.9	1.9	1.7	6.7	12.6
Fuel	-4.4	0.0	2.1	0.0	-2.4
Administered prices	0.6	0.1	-3.7	0.0	-3.0
Consumer Price Index	0.5	0.3	0.3	1.0	2.1
Core inflation	0.8	0.4	1.0	1.5	3.8

Note: The table shows the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of the so-called overlapping and incoming effects. The overlapping effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects changes in the current year. We decomposed these indices to the sub-aggregates of the consumer price index and calculated the inflationary effects of the changes in indirect taxes, administered prices, and market prices (not administered prices excluding indirect tax effects). The incoming indirect tax effect also includes the effect of increase in the retail margin on cigarettes.



**QUARTERLY REPORT ON INFLATION**

June 2013

Print: D-plus

H-1037 Budapest, Csillaghegyi út 19-21.

